

PLEASE join us <https://todaysmeet.com/NMSPed2016>



Technologies for Teaching Students with Autism: Language and Communication



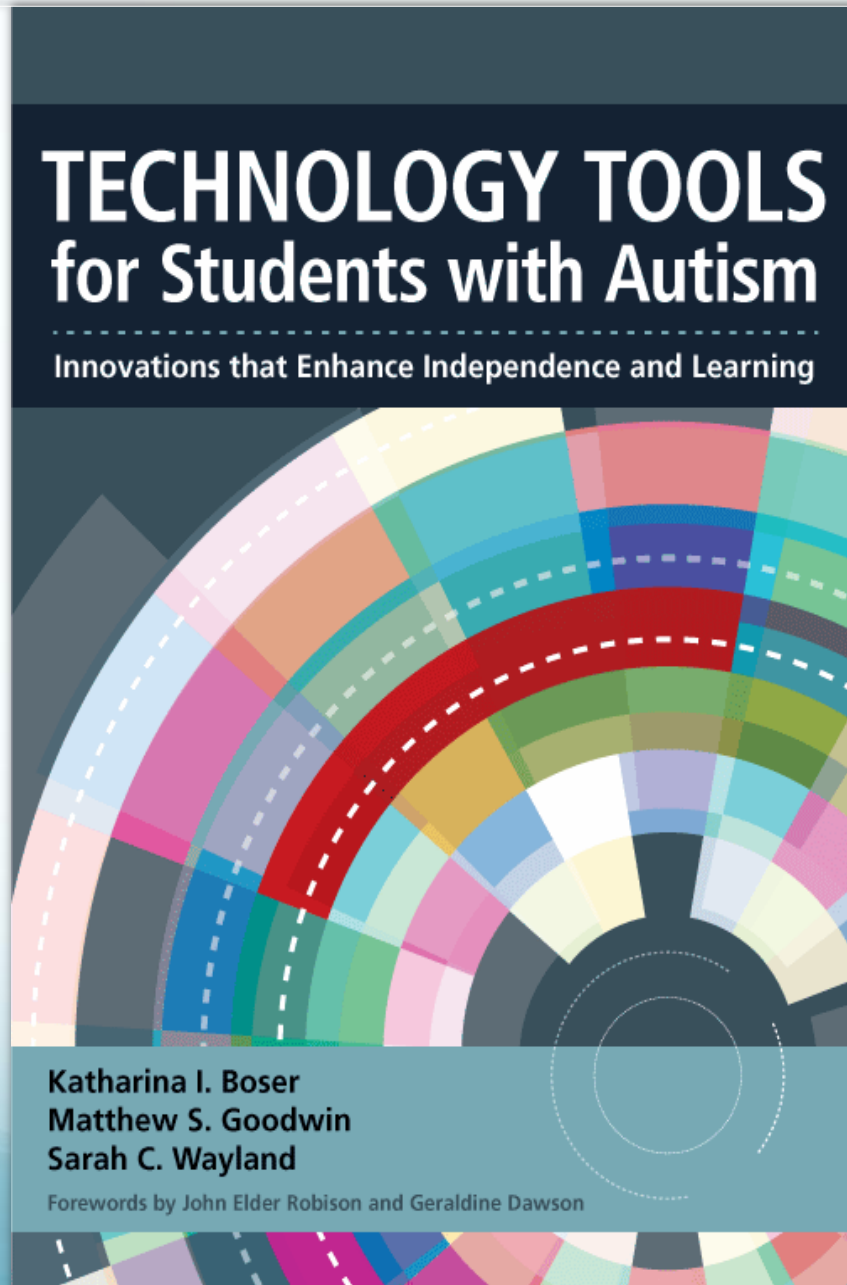
Katharina I. Boser, Ph.D.

<http://bit.ly/appsforautism>

<http://bit.ly/boserliteracytech>



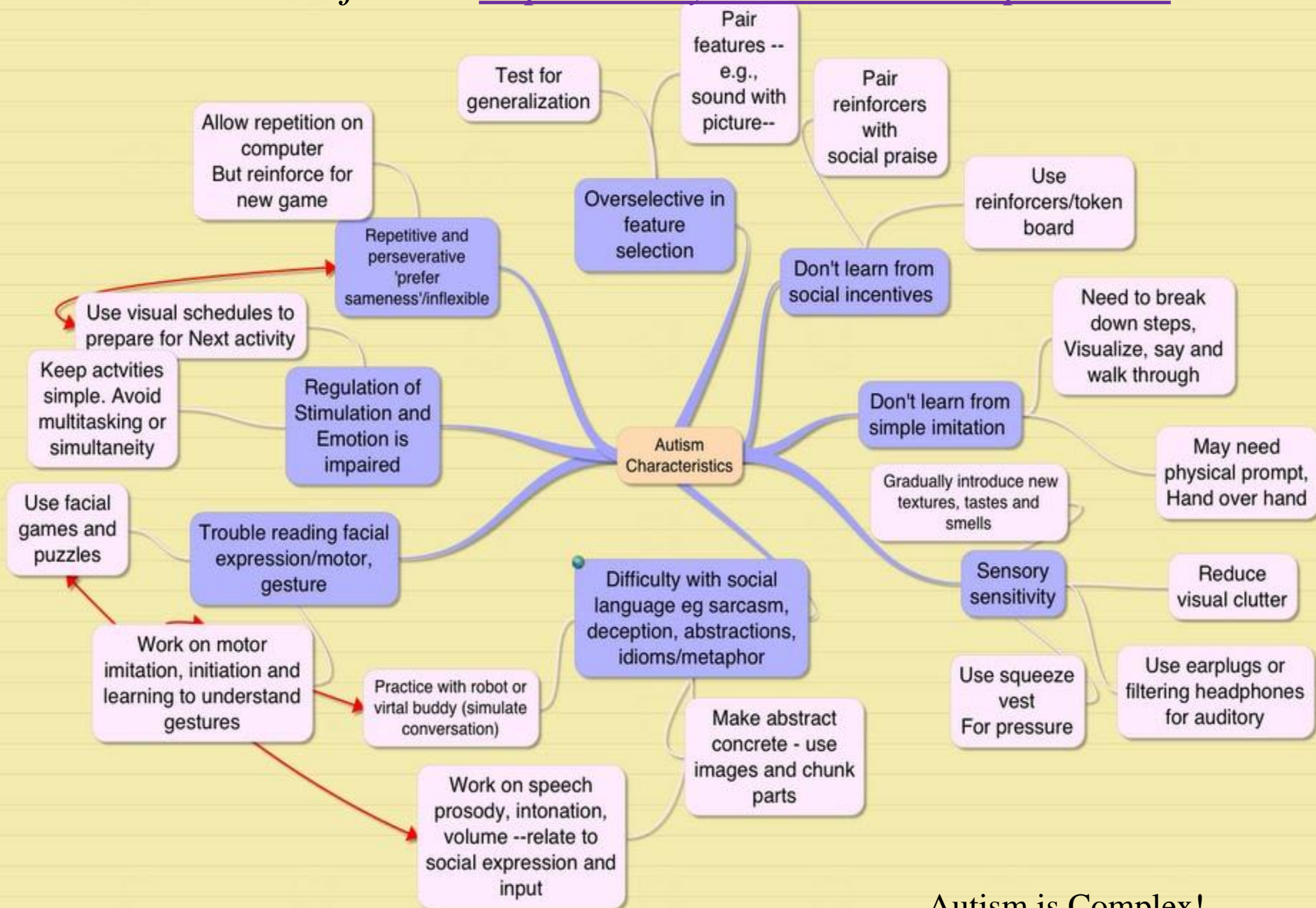
PLEASE join us <https://todaysmeet.com/NMSpEd2016>



Developed out of
**Innovative Technologies for
Autism group (ITA)**
for **Autism Speaks**
M Goodwin and K. Boser (Co-Chairs)
IMFAR-International Meeting for
Autism Research
And research on UDL, Autism and
Advocacy for Technology
S. Wayland-CASL
17 Chapters; Social, Educational and
Behavioral Areas and
Policy/Implementation
Technologies: VR, Robots, Cameras &
Sensors, Software/Hardware
Mobile Devices, Multi-Media

<http://www.amazon.com/Technology-Tools-Students-Autism-Independence/dp/1598572628>

PLEASE join us <https://todaysmeet.com/NMSpEd2016>



Autism is Complex!



98,000+
TWEETS



370,000+ MINUTES
VOICE CALLS ON
skype



320+
NEW
twitter
ACCOUNTS

100+
NEW
Linked in
ACCOUNTS

1 associated content
NEW
ARTICLE IS
PUBLISHED

THE
WORLD'S
LARGEST
COMMUNITY
CREATED CONTENT!!

6,600+
NEW
PICTURES ARE
UPLOADED ON
flickr



50+
WORDPRESS
DOWNLOADS

695,000+
facebook
STATUS
UPDATES



125+
PLUGIN
DOWNLOADS

79,364
WALL
POSTS

510,040
COMMENTS



1,700+
Firefox
DOWNLOADS



694,445
SEARCH
QUERIES

Google

Google Search

168 MILLION
EMAILS
ARE SENT



60+
NEW
BLOGS

1,500+
BLOG
POSTS

70+
DOMAINS
REGISTERED



600+
NEW
VIDEOS

100+
Answers.com
40+
YAHOO! ANSWERS

QUESTIONS
ASKED ON THE
INTERNET...

25+ HOURS
TOTAL
DURATION



20,000+
NEW
POSTS ON
tumblr.



13,000+
iPhone
APPLICATIONS
DOWNLOADED



1,600+
READS ON
Scribd.



13,000+ HOURS
MUSIC
STREAMING ON
PANDORA



12,000+
NEW ADS
POSTED ON
craigslist



1
NEW
DEFINITION
IS ADDED ON
urban

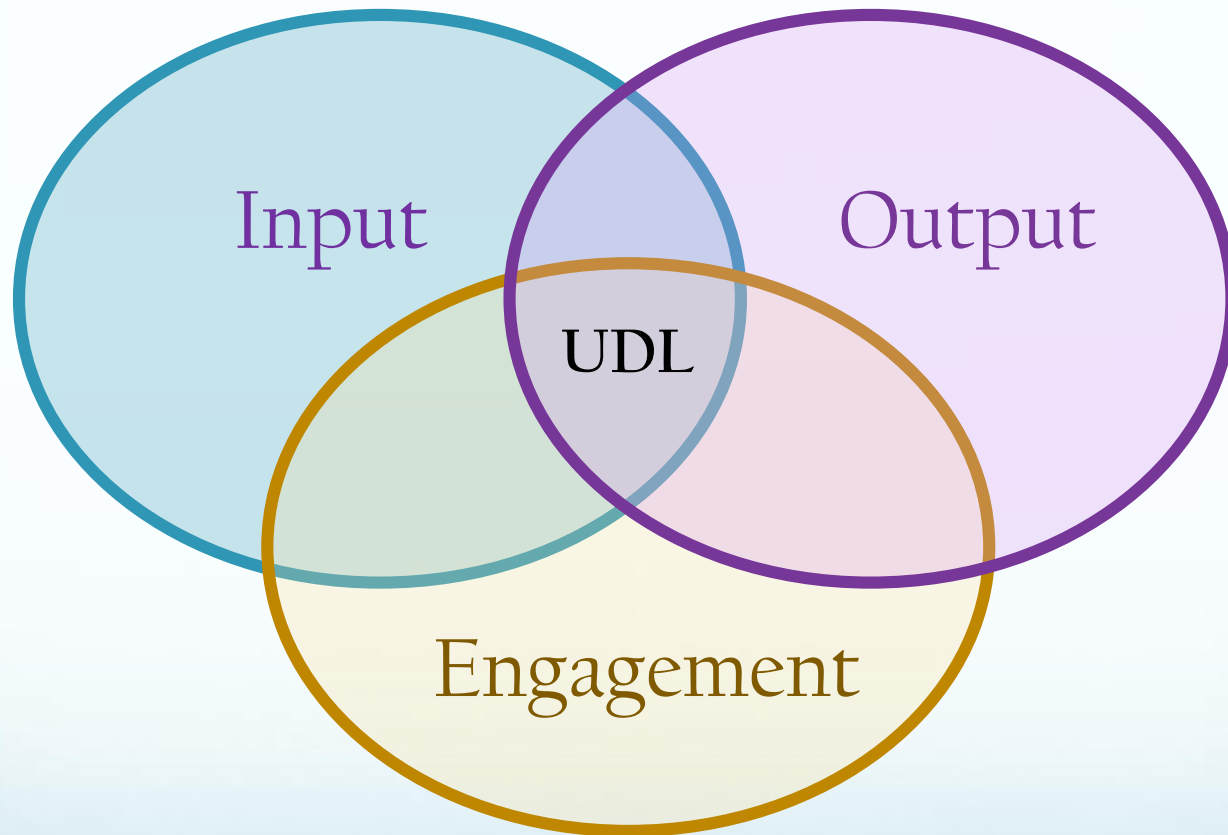
Making sense of the Tech Confusion!!



Not Just a Fish..but a Hook



UDL-Learning Networks



National Technology Integration Plan
Universal Design for Learning

<http://www.cast.org/publications/UDLguidelines/version1.html>

Connecting Brain Research and Universal Design for Learning (UDL)



The **WHAT** of
Learning

Recognition Network

Student: Making Connections, Long Term Memory, Ideas

Teacher: Uses Multiple and Flexible Means of **Presenting** what is to be Learned e.g., language Or concepts

INPUT

The **HOW** of
Learning

Expression/
Strategic Network

Student: Planning, Regulating and Executing Action for Output

Teacher: Allows Multiple and Flexible Means of **Demonstrating** what was Learned, e.g., physical, Building, creating

OUTPUT

The **WHY** of
Learning

Affective Network

Student: Connecting Emotionally, Providing Purpose
Teacher: Uses Multiple and Flexible Means of **Engaging** the learner in what is to be Learned, eg Self-regulation, reward interest.

ENGAGEMENT

Best Practices: Behavioral Treatment

- **Applied Behavioral Analysis** (ABA)
 - Discrete Trial Training (DTT, Lovaas, Smith)
- **Pivotal Response Training** (PRT, Koegel, Schreibman)
- Treatment and Education of Autistic and related Communication handicapped Children (**TEACCH**, Mesibov, Schopler)
- Developmental **Denver Model** (Dawson, Rogers)
- Developmental Individual Relationship-based. (**DIR**, Greenspan)
- Picture Exchange Communication System (**PECS**, Bondy & Frost)

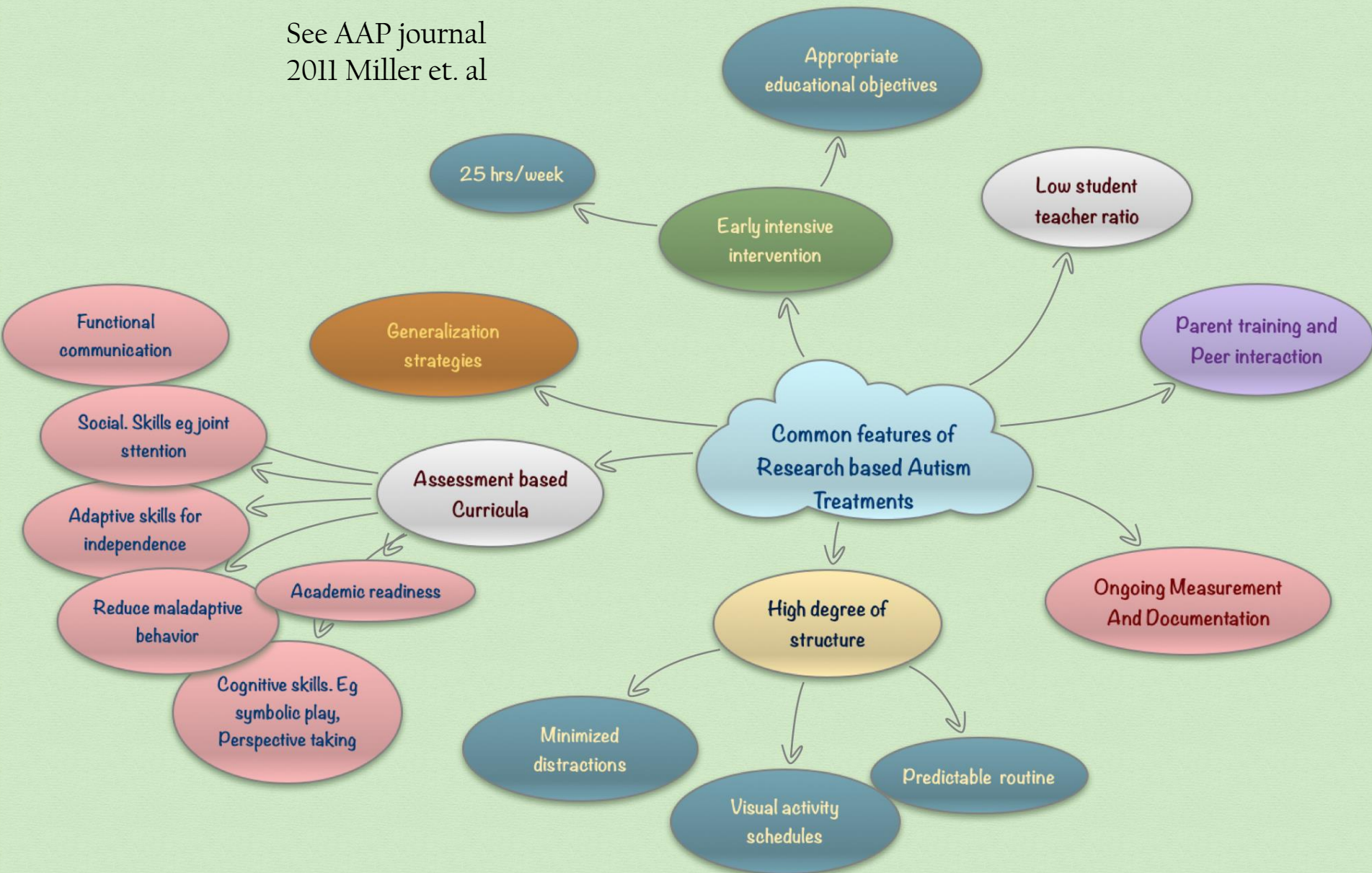
Features of Good Treatments

- **Early and intensive** intervention, with active engagement (at least 25 hrs/week in planned, appropriate activities w/ identified educational objectives);
- **Low student-to-teacher ratio** (1-on-1 time and small-group);
- Family component (including **Parent Training** as indicated)
- **Interaction with typically developing peers**;
- Ongoing **measurement and documentation** (adjust when indicated);
- Incorporation of a **high degree of structure** (e.g., predictable routine, visual activity schedules, and minimized distractions);
- **Strategies to apply learned skills to new environments** and situations (generalization) and to **maintain functional use** of these skills;
- **Assessment-based curricula** that address:
 - 1) functional, spontaneous **communication**
 - 2) **social skills**, including joint attention, imitation, reciprocal interaction, initiation, and self-management;
 - 3) functional **adaptive skills** that prepare responsibility and independence;
 - 4) **reduce of disruptive or maladaptive behavior**
 - 5) **cognitive skills**, such as symbolic play and perspective taking;
 - 6) traditional **readiness skills** and academic skills

See AAP journal
2011 Miller et. al

Best Practices: Autism Treatments

See AAP journal
2011 Miller et. al





Ipad as a Game Changer



Know your iPad

- Ipad Users Guide
- App start (ipad 101) or Autism Apps
- Understand itunes and itunesU (podcasts)
- Know your app developers on Social Media:
 - *Be sure they are connected with the community and not just creating a 'one-off' app*
 - *Connect with (itaalk.org, momswithapps, snapps, etc) where developers give 'freebies' and listen to feedback, changes are made.*
- Often better apps result from originally designed tool for desktop
 - *components are converted for mobile use*
 - *E.g, Vizzle, Nuance, Starfall,*

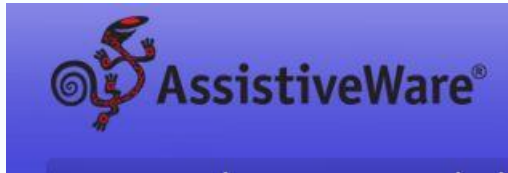


App start

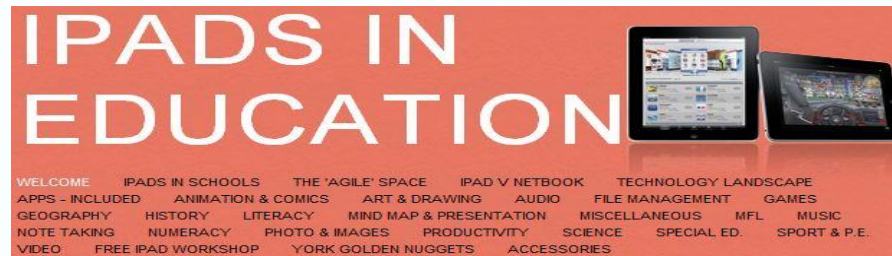


Autism apps

Know your Developers/Bloggers



http://www.ipadineducation.ianwilson.biz/ipad_in_Education/Welcome.html

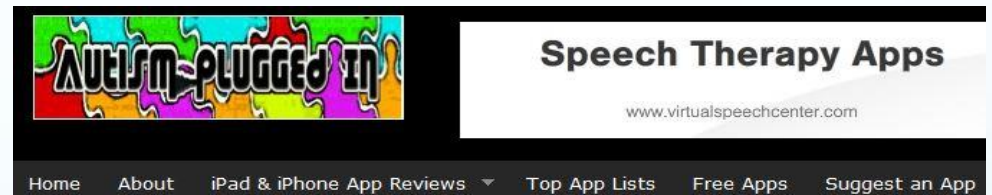


<http://www.assistiveware.com/>

<http://digitalstorytime.com>



<http://autismpluggedin.com>



<http://www.squidalicious.com/>



<http://mobile-educationstore.com/>



<http://ipadeducators.ning.com/>

<http://appsineducation.blogspot.com/p/app-s-for-teachers.html>

More best sites and blogs

- <http://specialappsspecialkids.blogspot.com/>
- <http://a4cwsn.com/>
- <http://bridgingapps.org> (formerly SNAapps)
- <http://teachingall.blogspot.com/>
- <http://udltechtoolkit.wikispaces.com>



Favorite Bloggers to follow

Apps in Education

Apptivities

Delicious/bookminder/ipad pilot

iGo With My iPad

iPad Academy

iPad Creative Blog

iPad Curriculum

iPad Inquiry

iPAD Learning LAB by The MASIE
Center

iPads at Burley

iPads in Education | Scoop.it

iPadTrial @ Epsom PS

PadGadget

RNPS iPad Trial

techchef4u

People to follow on Twitter
And through their RSS Feeds

Wes Fryer

Sylvia Tolisano

Tony Vincent

Reading Rockets

Lisa Parisi

Kyle Tomson

Shannon des Rosa

Wired mom

ReadWrite

Spectronics

TouchAutism

Digital Storytime

A4cwsn

N2teaching

Caryn jacobs

<http://bit.ly/appsforautism> -resources



Understand Accessories



- **Projection**, Ipad adaptors for projecting, wireless projection
- Ipad **protection** with Otterbox and others (see lilypad site)
- **Stylus**—different kinds available
- **Switch accessibility**—See handouts in Livebinder, depends on the app (<http://bit.ly/boserliteracytech>)
- **Guided Access** –restrict ability to get out of an app and where the user can touch (if at all)



Cloud Based Technology

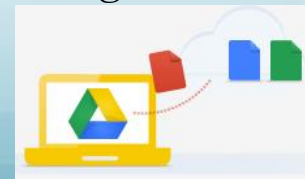
Connecting the Educator, Student and Parent!



- Global access by all involved
- Teacher, Coach or Parent can share, view, and collaborate on document—personalizing learning for student
- Access to different levels of engagement with data/activities (teacher, parent, student, etc.)
- Check secure Data protection on server
- Student has time to compose and think
- Learning at unconventional times

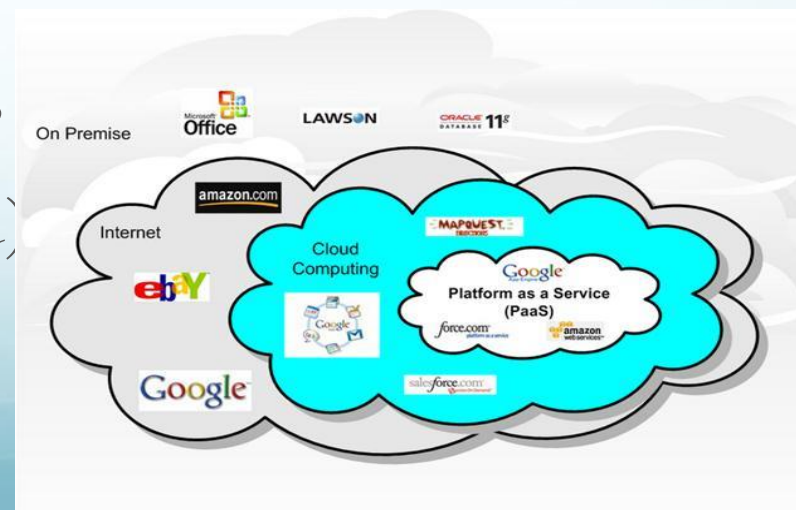


Google Drive



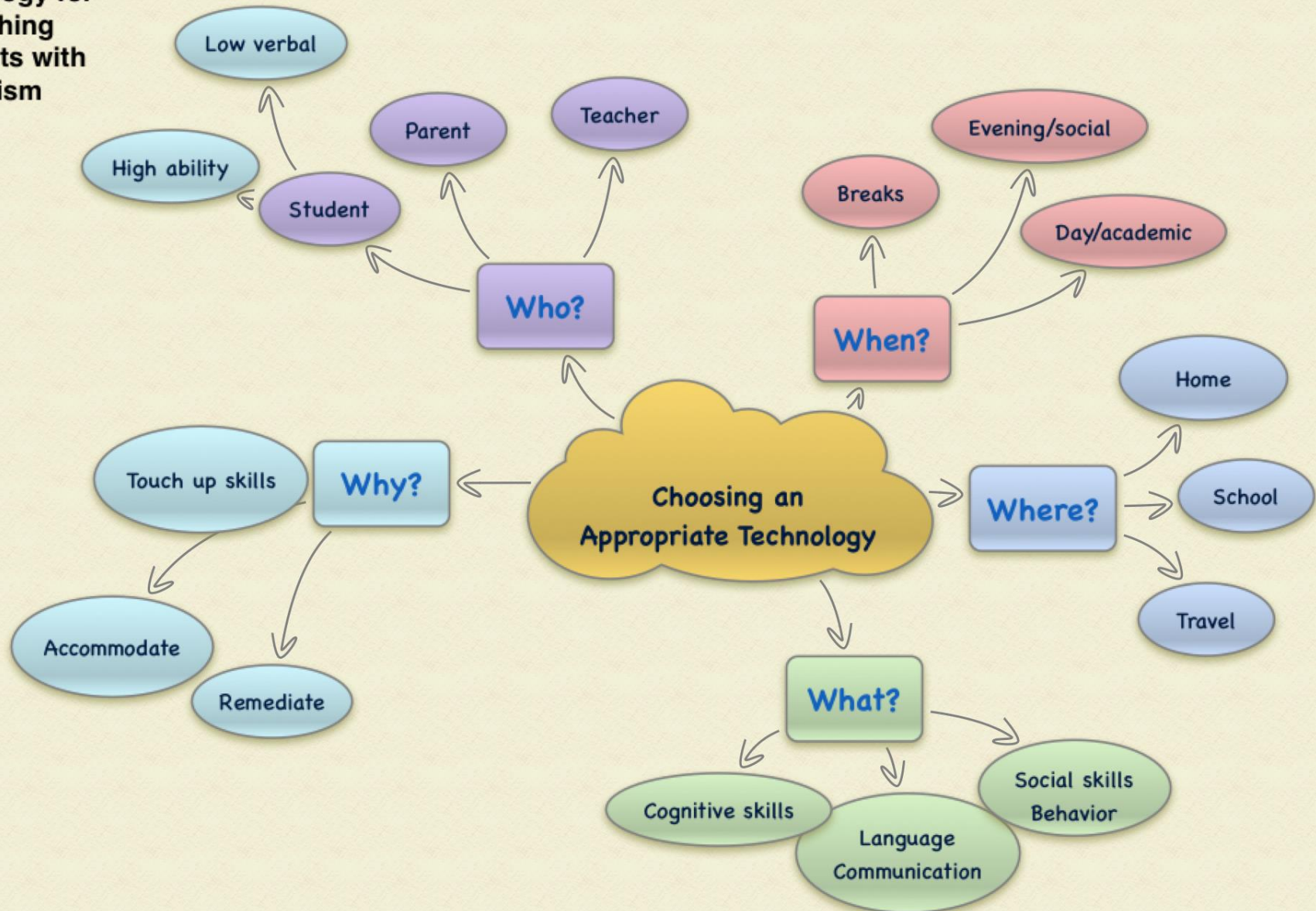
Some Drawbacks of Cloud

- Security—depends on server
- Not always available as needed (depends on bandwidth)
- Some devices not as reliable as needed (antenna strength etc.)
- See Resources on <http://bit.ly/boserliteracytech>
- Printing to non-wifi printer (iPad)
- Limited ability to see two windows
- Flash based videos and games (iPad)



Choosing Appropriate Technology

Evaluating
technology for
teaching
students with
autism





CRITICAL EVALUATION OF AN IPAD/IPOD APP

©2011. Kathleen Schrock (kathy@kathyschrock.net)

iPads in the Classroom site: <http://linkyy.com/ipad>

Van Houten
matrix

| Name of App: | | | developer | |
|--------------------------|---|---|--|--|
| Content / Topic | | | developer Website: | |
| Date reviewed | | Version: | Last up date: | |
| Review by: | | | Date: | Cost: |
| Domain | 1 Weak Quality | 2 Fair Quality | 3 Good Quality | 4 High Quality |
| Curriculum Connection | Does not meet expectation | Limited or narrow scope of the topic. Under developed. | Skills or concept are practiced and reinforced. Limited level of consideration. | Very strong connection to the skill or concept being practiced. Levels of consideration offered. |
| Type of Skills practices | No skill practice only "flashcard" drill | Skills are practiced in gaming format. | Simulated learning environment (virtual tasks). Scaffolds activities (Beginner - Advance) | Problem based learning with simulated environment. Program monitors and advances difficulty. |
| Age and Grade Level | Level is not appropriate for audience. Not suitable for age or grade level. Directions are incomplete or inadequate | Level is often too easy or difficult for target audience. Features unsuitable material. Directions are unclear. | Level is appropriate but some portions maybe to easy or difficult. Most directions are clear but some are confusing. | Level is appropriate for target audience (age and grade). Directions are clear and complete. |
| Adjustable levels | Only 1 level | 2-3 levels | 4-5 levels | More than 5 levels |
| Prompts | No feedback offered moves forward with correct or incorrect responses | Prompt is limited to indicating wrong answer. Student needs to get it right to move forward | Prompt is specific - pre-set number of tries (can't edit) before student moves forward | Prompt is specific - can set number of tries - there is a tutorial to help student |
| Ease of Use | Very difficult to use. Limited or no instructions. Student needs support on | Student needs to be cued through the process. | Student needs support (model) from adult or another peer | Intuitive student can figure out independently |
| Engagement | Does not meet expectation | Held the individual attention for more than 2-3 minutes | Held the individual attention for more than 5 minutes | Held the individual attention for more than 10 minutes |
| Customization | None | Can turn prompts off and music | Add your own items and prompts | All features are customizable including |

SETT Framework

Student, Environment, Tasks, & Tools

<http://www.joyzabala.com/Documents.html>

Student's Name: _____ Date: _____

Planning/Implementation Team Members: _____

Area(s) of concern targeted for change: _____

| STEPS | QUESTIONS | PLANS |
|-------|--|-------|
| 1 | Describe important, frequently occurring activities that provide embedded opportunities for the student to develop and use priority skills. <i>Include when, where, and with whom they take place.</i> | |
| 2 | Identify existing barriers that make the performance of the skills or participation in these activities difficult or impossible for the student. | |
| 3 | Identify assistive technology tools to be used (or tried) to remove barriers to performance and enhance the student's ability to develop targeted skills within the activities. <i>Provide viable options for performance.</i> | |
| 4 | Determine additional strategies, accommodations, or modifications which will be used to encourage the student's participation in the activity to be more active and powerful. | |

responsive environment, or (c) perform the task successfully with less personal assistance. If yes, indicate in column 3.

8. If team members are not familiar with assistive technology tools that could address remaining barriers or need additional assistance, indicate in column

Feature Matching Grid for Language Apps

FEATURE MATCHING GRID (LANGUAGE APPS)

| APPS | Proloquo2go | MyTalk | Grace | AACSpeechBuddy | Alexicom AAC | Expressive | iAssist Communicator | iComm | iCommunicate | iConverse | iPACS | Look2Learn | Sounding Board | Speaking Images | Tap to Talk |
|-----------------------|-------------|--------|-------|----------------|--------------|------------|----------------------|-------|--------------|-----------|-------|------------|----------------|-----------------|-------------|
| PURPOSE OF USE | | | | | | | | | | | | | | | |
| Expressive | | | | | | | | | | | | | | | |
| Receptive | | | | | | | | | | | | | | | |
| Organizational | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| OUTPUT | | | | | | | | | | | | | | | |
| Digitized | | | | | | | | | | | | | | | |
| Synthesized | | | | | | | | | | | | | | | |
| male | | | | | | | | | | | | | | | |

See chapter 7, page 137

LiveBinder Resources

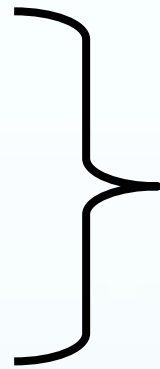
- <http://bit.ly/boserliteracytech>
- Test out a QR code reader below (i-nigma works well)
- Find the Evaluation Websites under the Green tab



Specific Learning Disabilities

Disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language resulting from an imperfect ability to:

- listen,
- speak,
- read,
- write,
- spell,
- think,
- do mathematical calculations.

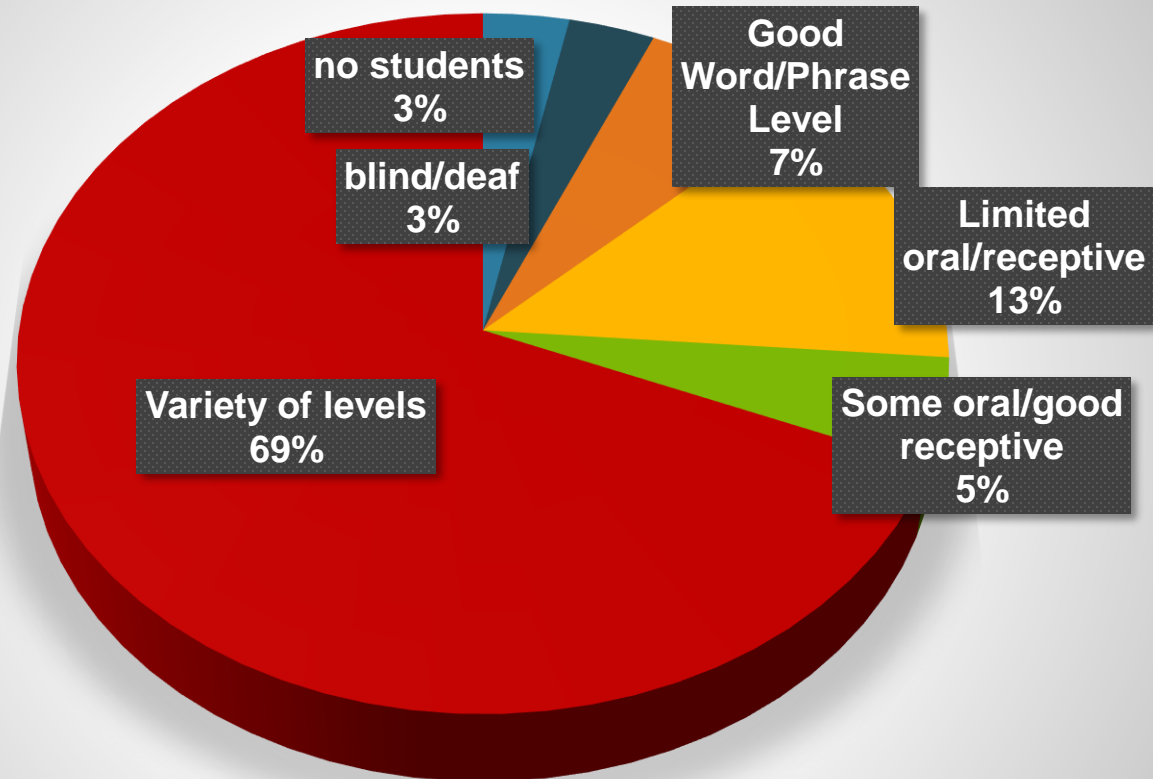


Language Based

May be language or executive function based

May be due to difficulties with visual processing, language, or executive functioning

Types of Language Disabilities



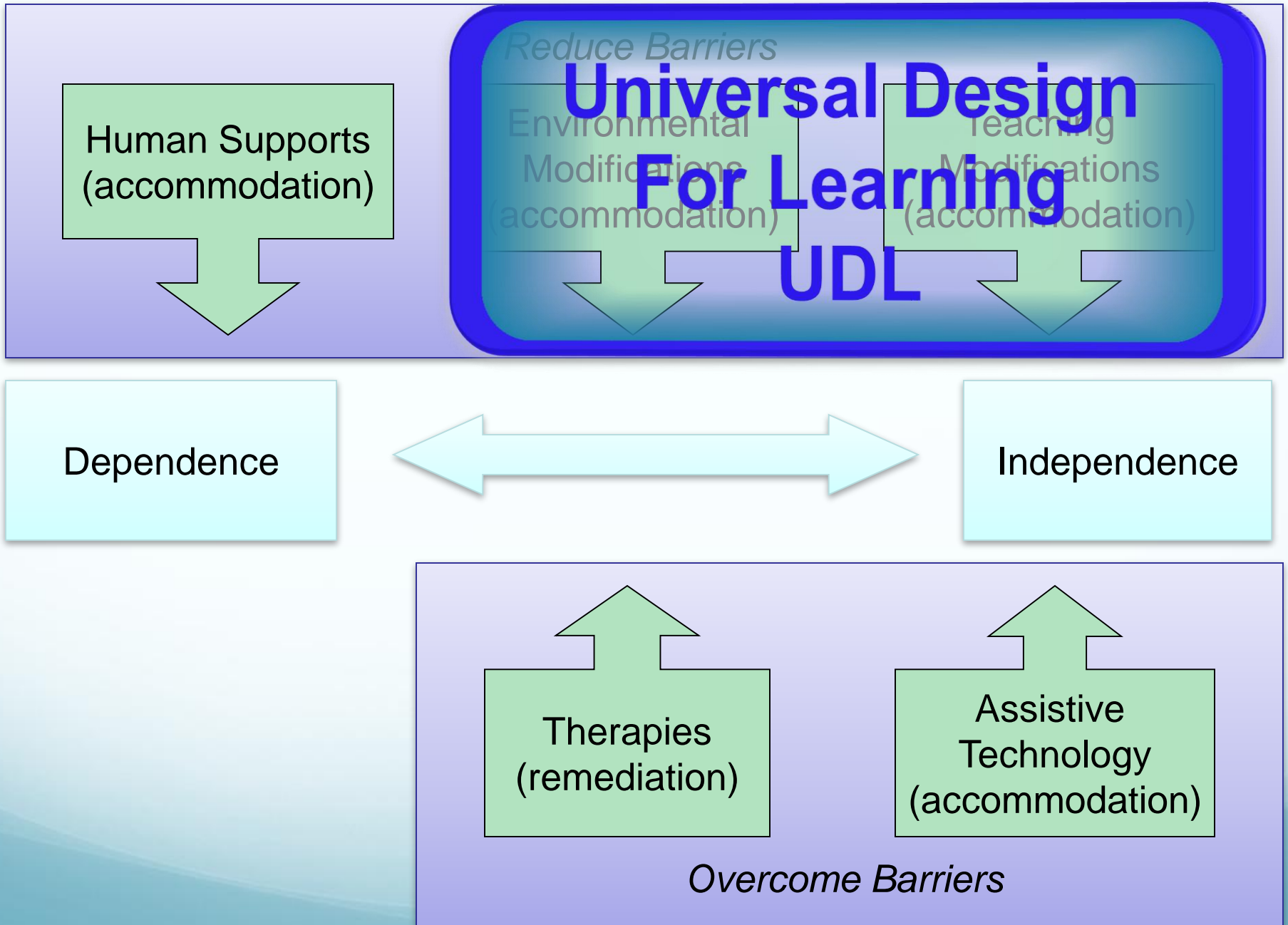
Language Systems

Spoken

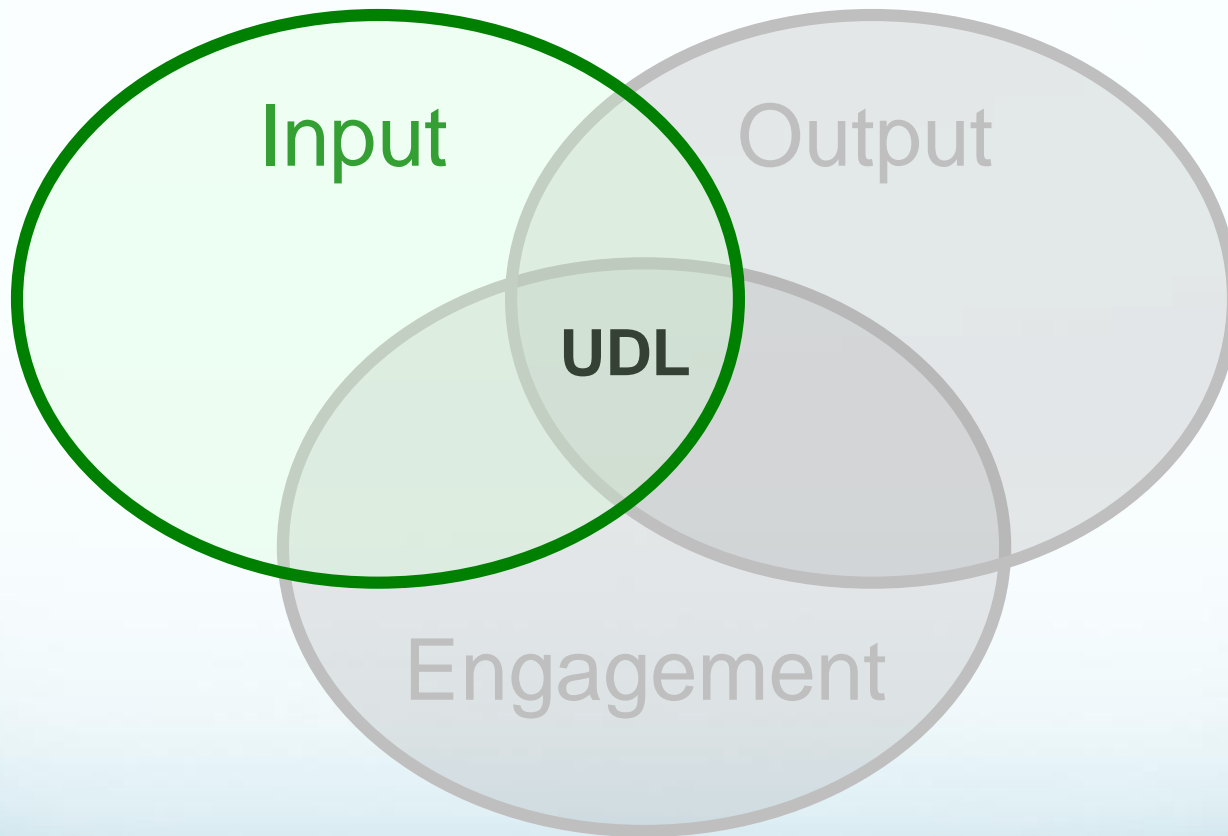
- Auditory processing
- Phonology (sounds)
- Vocabulary
 - semantics (meaning)
- Syntax (word order)
- Discourse
- Pragmatics

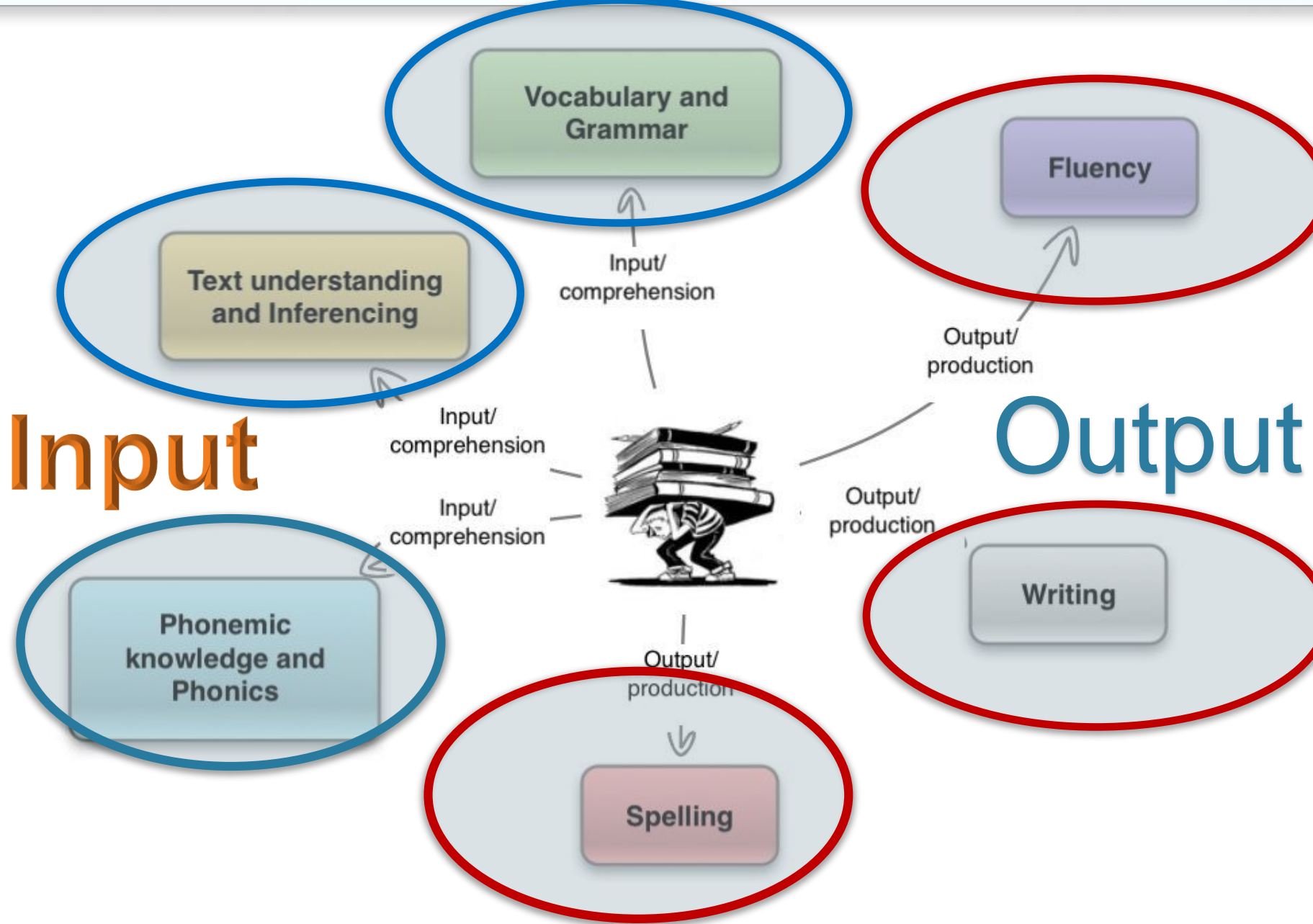
Written

- Visual processing
- Orthography (letters)
- Vocabulary
 - semantics (meaning)
- Syntax (word order)
- Discourse structure



Input Learning Network





Overview

- Reading/Language Comprehension (Input)
 - Word Games and basic comprehension tools to Engage
 - Graphic Organizers and Mind Maps
- Expressive Language (Output)
 - Communication Systems
 - Writing and keyboarding output systems that speak and predict words (STT & TTS)
- Data /Schedulers Management (covered more on Wikisite)
- Reading apps for making inferences, and books with speech to text, visuals and definitions
- Ebook creators and Story Telling apps

Word Games for Basic Comprehension

Strengthening phonics, spelling and single word meaning

Assessments/Games: Tiny Tap, BitsBoard and CardBoard

- Allows you to create your own games with images and sound/text..
- Record the questions and insert images representing the answer, or create a hotspot inside a single image where the answer should be.
- Cardboard lets you create a Memory Match task out of any word or picture pairs. Can import files from google drive. Create the two lists of pairs as side by side columns in the spreadsheet.



Tiny Tap

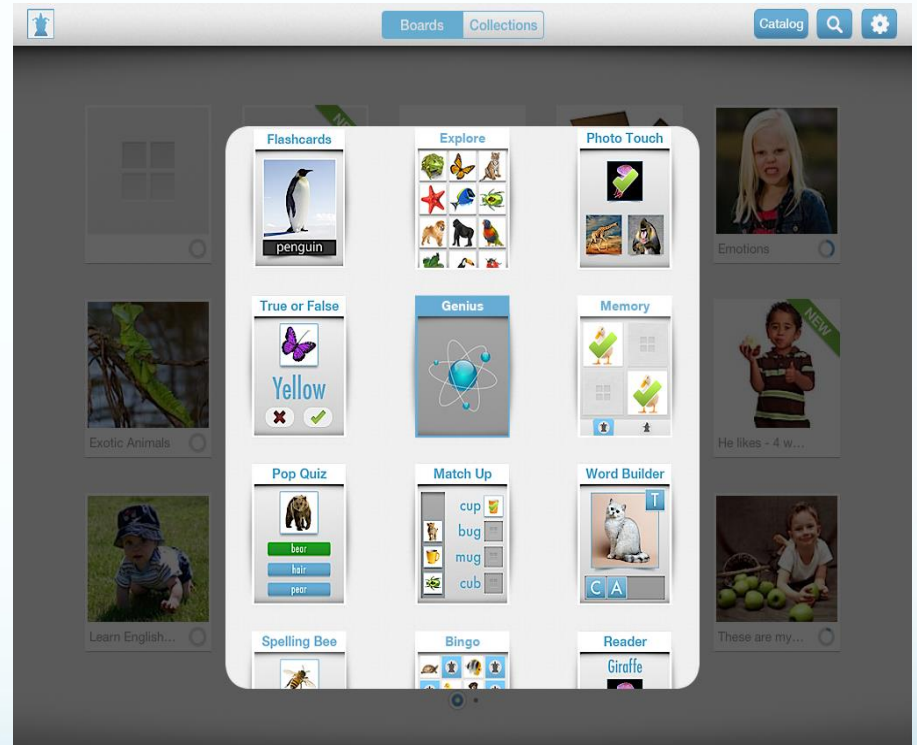
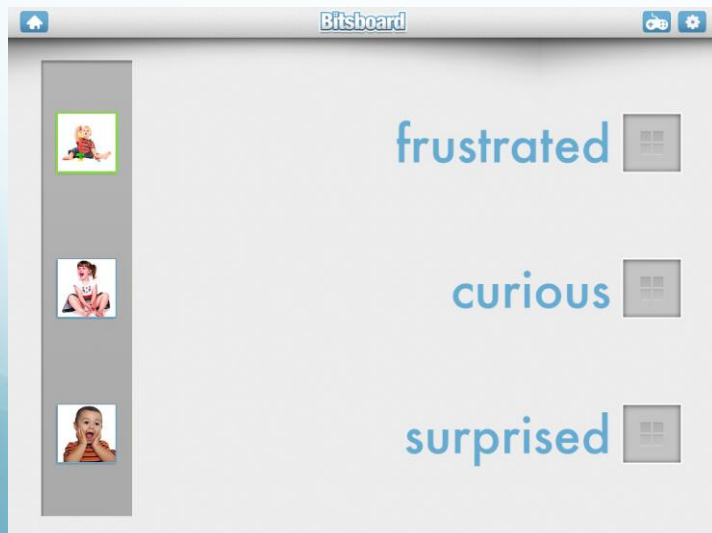
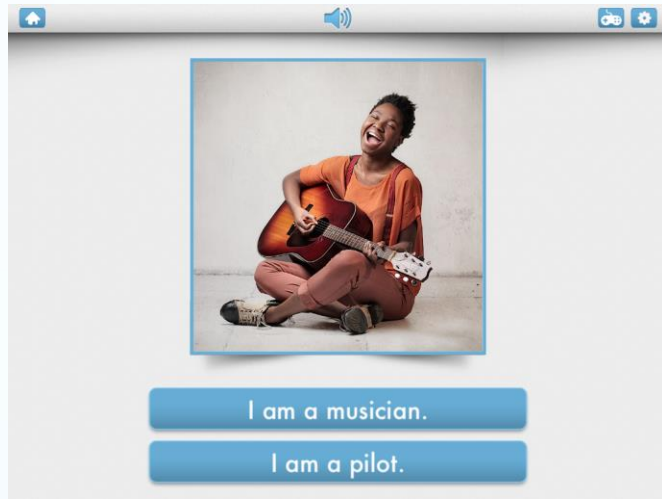


BitsBoard



Cardboard

Adaptive learning for Vocabulary/Spelling: BitsBoard



Takes basic data on item learning, has an adapted learning system. Allows many different ways to learn, easily customizable (photos and voice)

Tiny Tap

- Create Games, assign lessons, assess and score progress (with pro version) \$9.99/month—1,000 plus games



Vocabulary in context: Scene Speak and Scene & Heard:



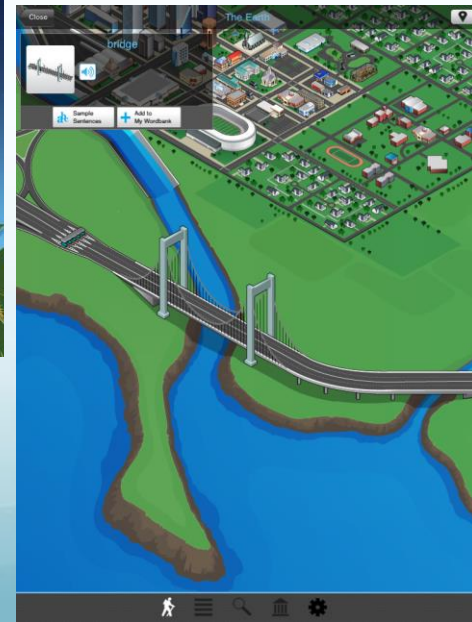
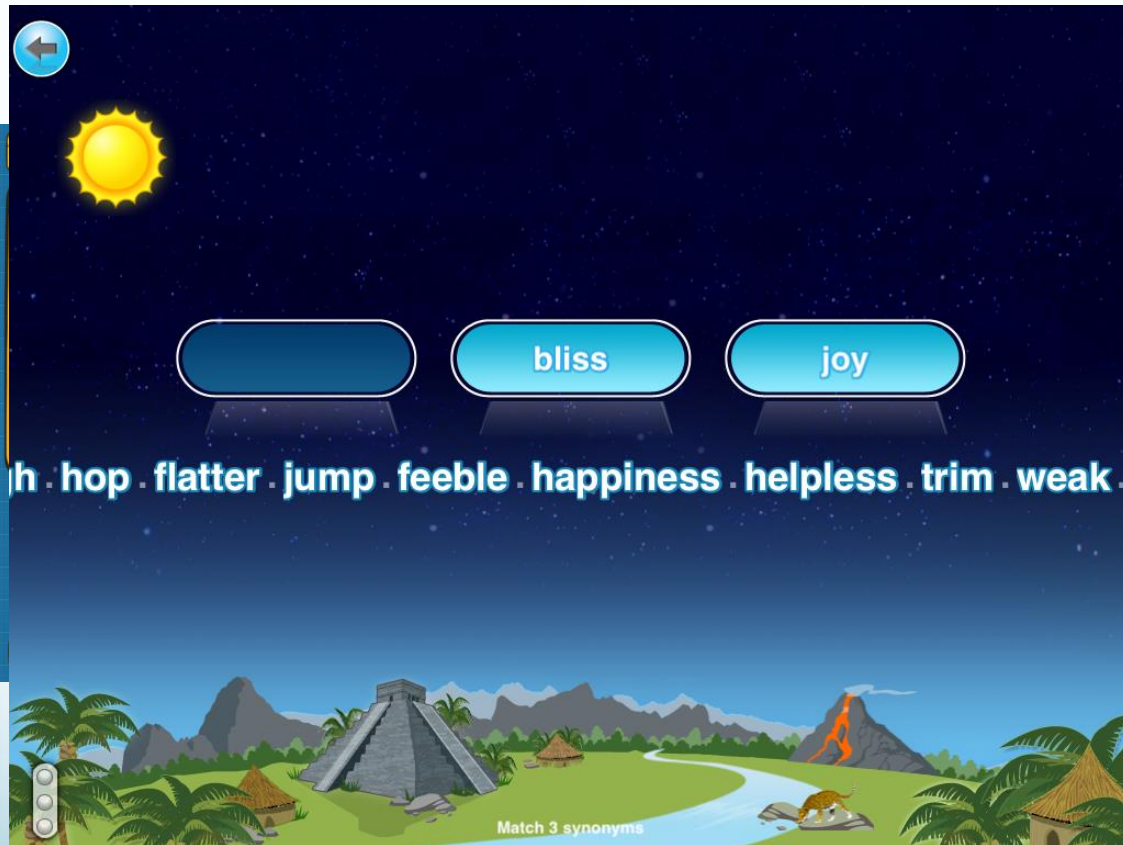
Allows hotspots with recordings on a picture

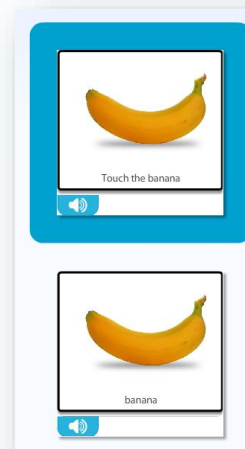
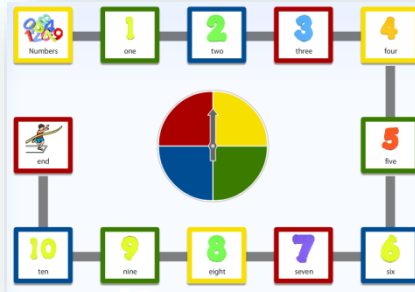
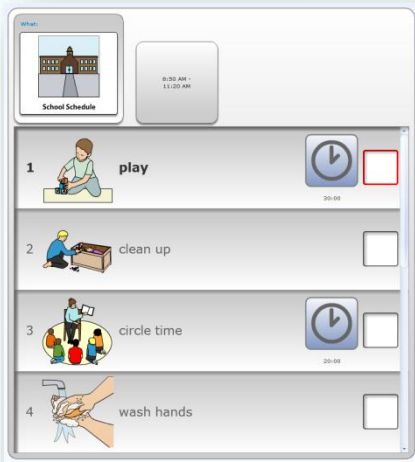


Cost is 7.99 per app

Switch accessible

Visual Word Games: Bluster, Opposites, Visual Dictionary

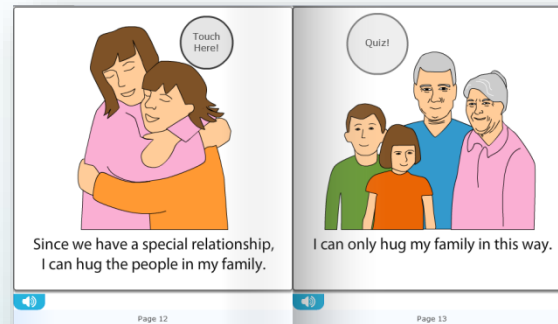
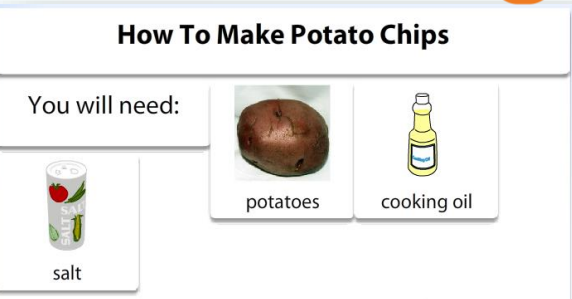




vizzle
visual learning



Scheduler



Drag and Drop Visual Templates:

- Matching
- Build-A-Book
- Game
- Sorting
- Phonics +
- Pix2Go
- Scheduler
- Token-Board
- Timer
- First Then

VizZle Choice Board

Exit

First

game

game

Next

books

storytime

books

Then

jumping

Add/Drag Library Media or

trampoline

The image shows a software interface for a choice board. It has a blue background. At the top left is an 'Exit' button. Below it are three main sections labeled 'First', 'Next', and 'Then', each with a right-pointing arrow button. The 'First' section contains a large box with an illustration of a red game piece on a wooden board next to a colorful spinner, with the word 'game' written above and below it. A green right-pointing arrow is to the right of this box. The 'Next' section contains three small boxes with icons and labels: 'books' (bookshelf icon), 'storytime' (two children reading icon), and 'books' (bookshelf icon). A green right-pointing arrow is to the right of this section. The 'Then' section contains three boxes: 'jumping' (child jumping icon), a box with the text 'Add/Drag Library Media or' and two small media icons (a speaker and a book), and 'trampoline' (trampoline icon).

Scalable Student Manager

Chrome File Edit View History Bookmarks Window Help

Joyce Whitby wants to share Effective educational software Monarchteachtech.com - Cal Home - Google Docs VizZle

www.govizzle.com/vizzle/#vizzle

vizzle Create Teach Share Help bat Logout

My Folders

- My Vizzle
 - My Tools
 - My Media
 - My Lessons
 - Al D
 - Billy B
 - Harold A
 - Jack F
 - Justin C
 - Louie W
 - Roy M
 - Teq T
 - Magic Media
 - Search Results
 - Clipboard
 - Recycle Bin

My Profile

First Name Joyce

Last Name Whitby

Change Password

Student Manager

| First Name | Last Name | Date Added |
|------------|-----------|-----------------------------------|
| Mary | Mouse | Mon Apr 9 10:52:45 GMT-0400 2012 |
| Kate | Moe | Thu Apr 5 14:33:21 GMT-0400 2012 |
| Dee | Dee | Mon Apr 2 11:48:24 GMT-0400 2012 |
| Ann Mary | smith | Wed Mar 28 13:16:20 GMT-0400 2012 |
| alice | joyce | Wed Mar 28 13:07:38 GMT-0400 2012 |
| Either | Jimmy | Wed Mar 28 13:07:02 GMT-0400 2012 |
| lee ray | Thomas | Tue Mar 27 10:35:22 GMT-0400 2012 |
| holiie | smith | Tue Mar 27 10:33:07 GMT-0400 2012 |
| Jab | Jore | Fri Mar 23 09:12:38 GMT-0400 2012 |
| teggra | woods | Fri Mar 23 09:12:14 GMT-0400 2012 |
| Jon | Doe | Thu Mar 22 15:41:57 GMT-0400 2012 |

Move Checked

Move Checked

| First Name | Last Name |
|---------------------------------|-----------|
| <input type="checkbox"/> Teq | Teq |
| <input type="checkbox"/> Roy | Mann |
| <input type="checkbox"/> Jack | Frost |
| <input type="checkbox"/> Louie | Whitby |
| <input type="checkbox"/> Al | Dente |
| <input type="checkbox"/> Justin | Case |
| <input type="checkbox"/> Harold | Angel |
| <input type="checkbox"/> Billy | Bob |

First Name Harold

Username harolda

Last Name Angel

Teachers Joyce Whitby, Stacey Clemence, Stacey Clemence

Edit Student Details / Student Password

Keeping Data Real !!!

Chrome File Edit View History Bookmarks Window Help

joyce Whitby wants to share x Effective educational softwar x 10 Monarchteachtech.com - Cal x Home - Google Docs x VizZle

www.govizzle.com/vizzle/#vizzle

vizzle Create Teach Share Help Search Logout

My Folders

- My Vizzle
 - My Tools
 - My Media
 - My Lessons
- Al D
- Billy B
- Harold A
 - Tools
 - Media
 - Lessons
- Shared
 - Jack F
 - Justin C
 - Louie W
 - Rov M
 - Harold A

Profile Data Goal Creator

Harold's Data

Displaying data from: IEP Objectives: Correctly identify prepositions in representational format (generalized), Color Match, Interpret the structure of expressions, Identifying Characters, Write expressions in equivalent forms to solve problems, Identifying Details, Identifying Location/Setting

<< Back

| Percentage Cor... | # Correct | # Incorrect | # of Questions | Date | Lesson ID | Lesson Name | Total Time in min... | User ID |
|-------------------|-----------|-------------|----------------|------------|-----------|----------------------------------|----------------------|-----------------------|
| 0 | 0 | 0 | 0 | 2011-10-04 | 18400 | Leo's Prepositions | 0.6 | jwhitby@monarchtt.com |
| 0 | 0 | 7 | 7 | 2011-10-04 | 9886 | Leprechaun Prepositions | 0.7 | jwhitby@monarchtt.com |
| 8 | 1 | 11 | 12 | 2011-10-04 | 33400 | "In" or "On" - Dolly & the Train | 1.3 | jwhitby@monarchtt.com |
| 33 | 4 | 8 | 12 | 2011-10-04 | 33400 | "In" or "On" - Dolly & the Train | 6.1 | jwhitby@monarchtt.com |

Harold's Data

Displaying data from: IEP Objectives: Correctly identify prepositions in representational format (generalized), Color Match, Interpret the structure of expressions, Identifying Characters, Write expressions in equivalent forms to solve problems, Identifying Details, Identifying Location/Setting

<< Back

| Percentage Cor... | # Correct | # Incorrect | # of Questions | Date | Lesson ID | Lesson Name | Total Time in min... |
|-------------------|-----------|-------------|----------------|------------|-----------|----------------------------------|----------------------|
| 0 | 0 | 0 | 0 | 2011-10-04 | 18400 | Leo's Prepositions | 0.6 |
| 0 | 0 | 7 | 7 | 2011-10-04 | 9886 | Leprechaun Prepositions | 0.7 |
| 8 | 1 | 11 | 12 | 2011-10-04 | 33400 | "In" or "On" - Dolly & the Train | 1.3 |
| 33 | 4 | 8 | 12 | 2011-10-04 | 33400 | "In" or "On" - Dolly & the Train | 6.1 |
| 80 | 4 | 1 | 5 | 2011-10-06 | 48485 | Johnny's Color Match | 1.9 |
| 71 | 5 | 2 | 7 | 2012-01-06 | 78560 | Find the Character (Wisharoo) | 0.5 |
| 71 | 5 | 2 | 7 | 2012-01-06 | 78560 | Find the Character (Wisharoo) | 0.7 |
| 100 | 5 | 0 | 5 | 2012-03-29 | 131865 | I did a great job example | 0.4 |

Overview

- Reading/Language Comprehension (Input)
 - Word Games and Assessment tools to Engage
 - **Graphic Organizers and Mind Maps**
- Expressive Language (Output)
 - Communication Systems
 - Writing and keyboarding output systems that speak and predict words (STT & TTS)
- Data /Schedulers Management (covered more on Wikisite)
- Reading apps for making inferences, and books with speech to text, visuals and definitions
- Ebook creators and Story Telling apps

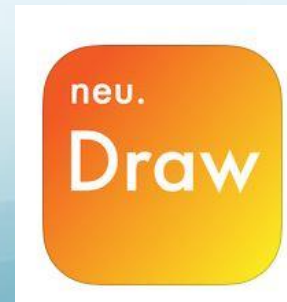
Mind Mapping Apps:



Magical Pad

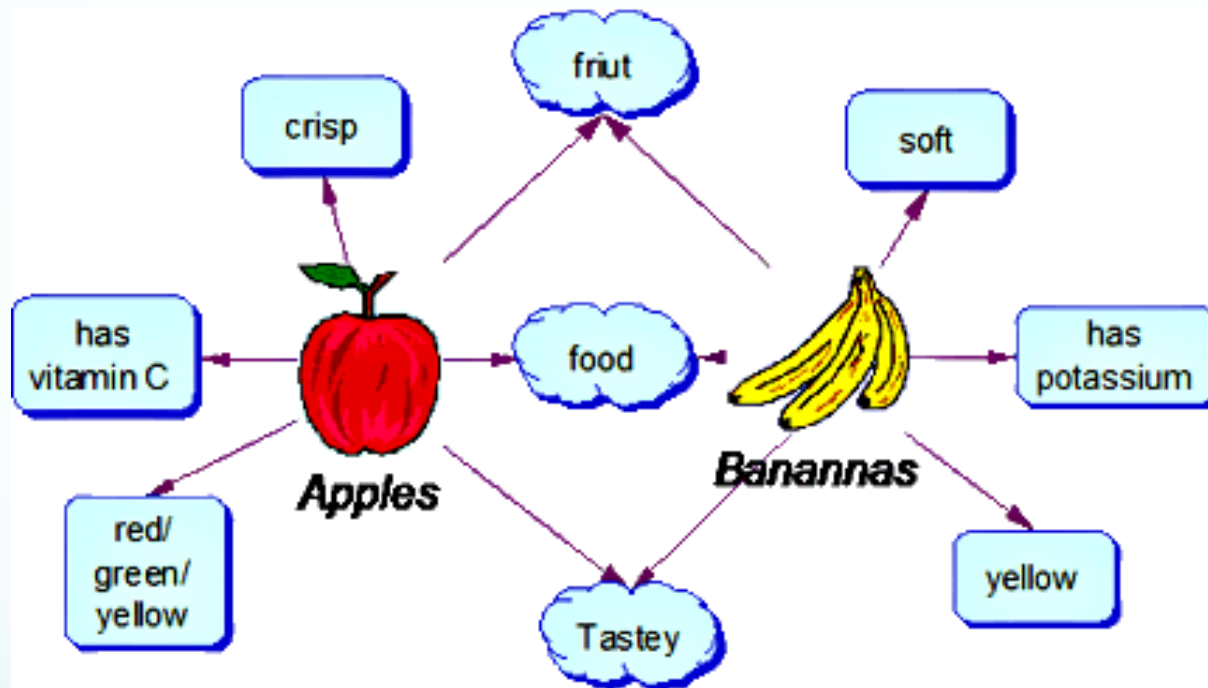


Popplet



- Inspiration Maps--\$14.99 for lots of templates and conversion to outline from diagram
- Corkulous—large sticky note board with changing colors
- Mindjet—works cross platform, arrows and shapes and insertion of links and images. free
- iThoughts—converts to multiple formats—nice colors and features, icons for importance and task integration (cost 7.99)
- Popplet-free version allows one popplet
- Magical Pad (1.99)
- Idea Sketch (free or .99)
- Neu Draw (1.99-2.99)

Examples



Name: _____

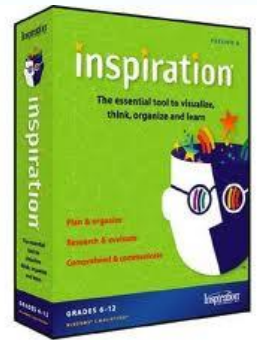
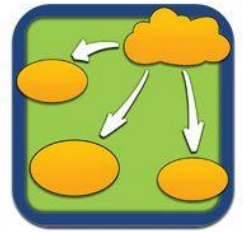
Double Words

Draw and write the two different meanings for the word in the middle.

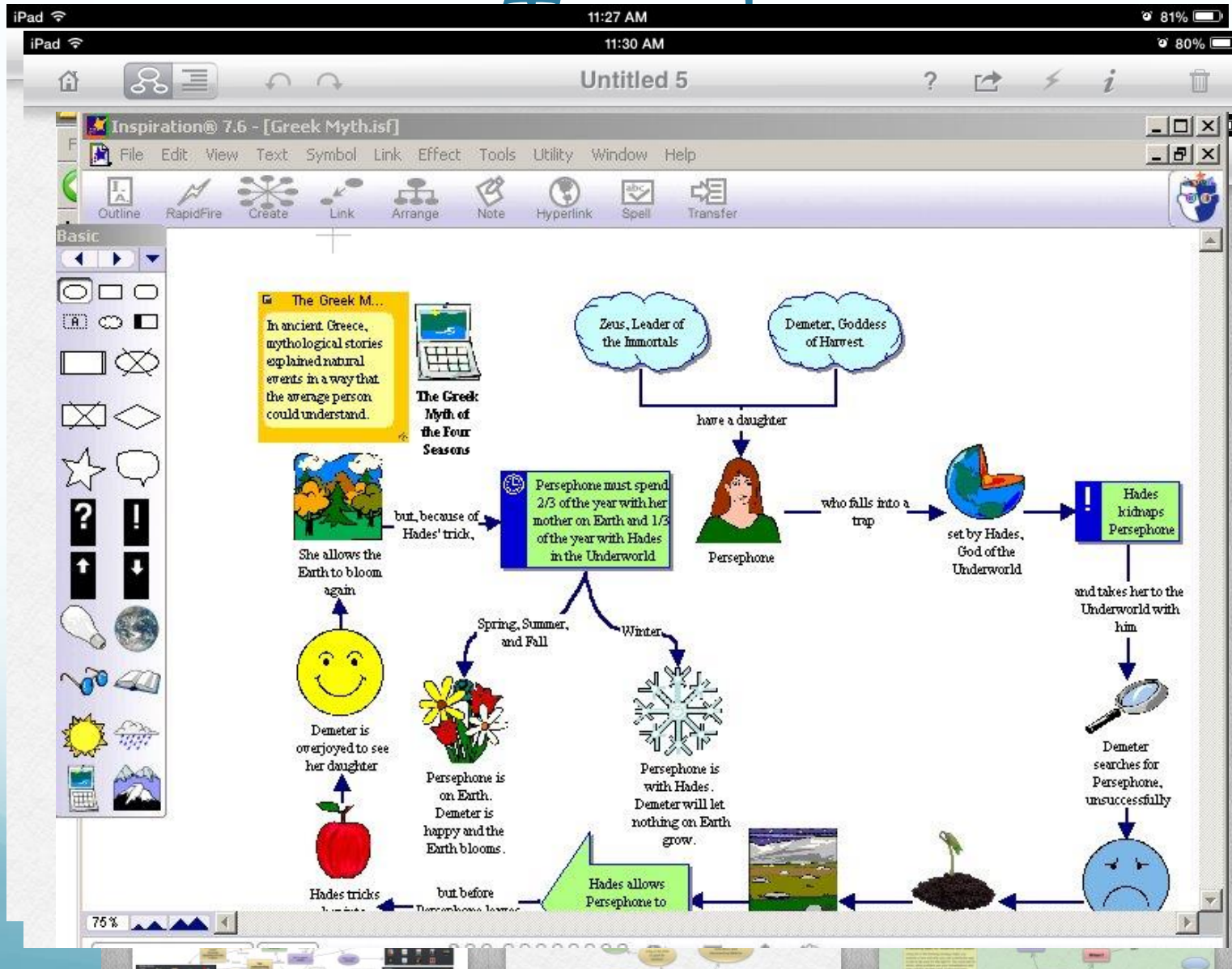
| | | |
|--|--------------|--|
| | check | |
| | | |

| | |
|--|-------|
| | _____ |
| | _____ |
| | _____ |
| | _____ |

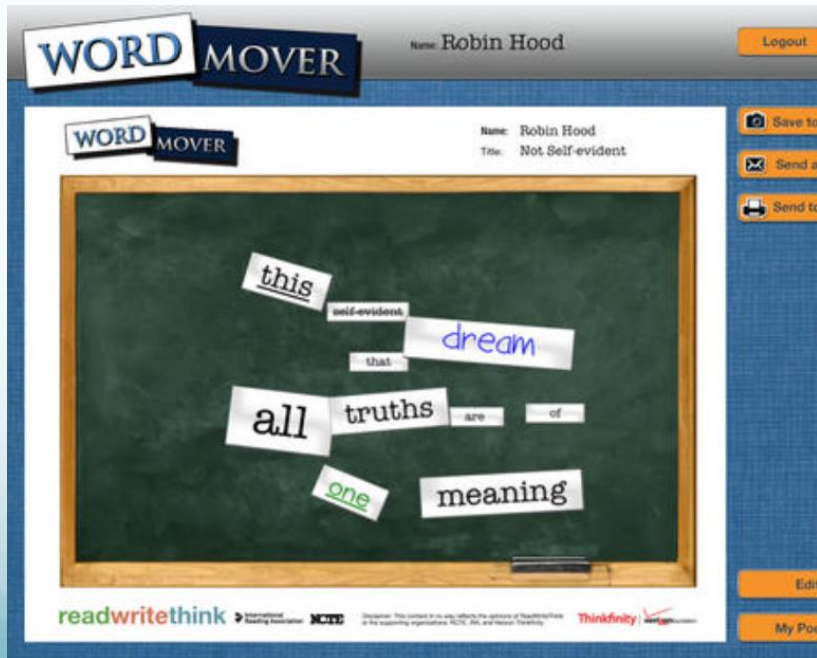
Inspiration/Kidspiration



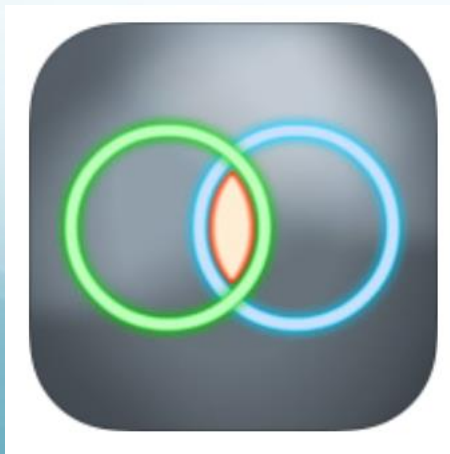
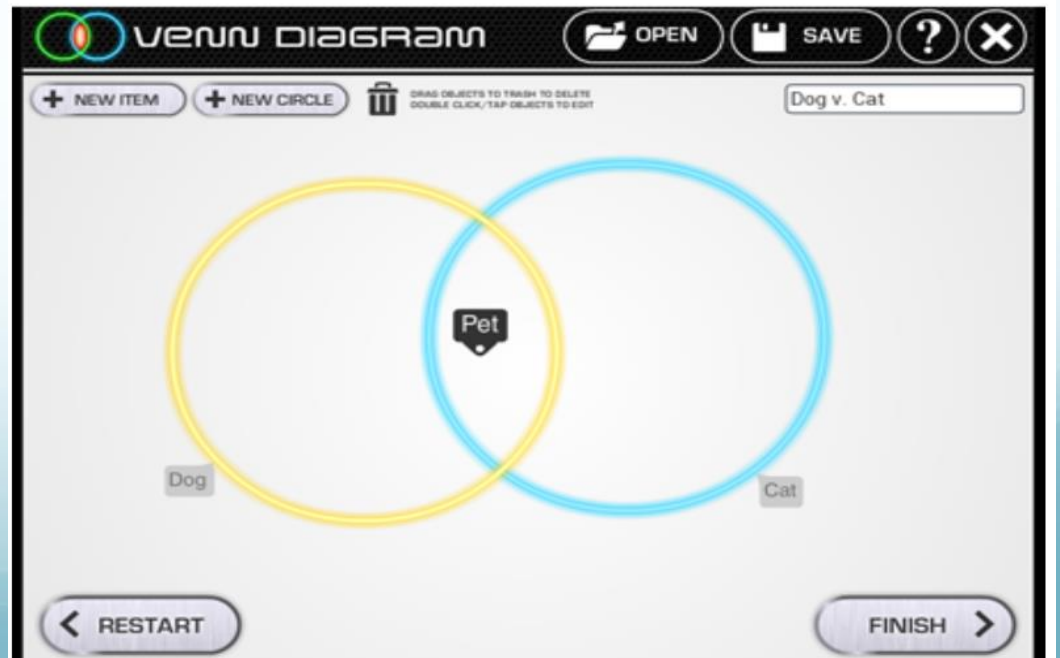
See Video in
Live Binder



Read Write Think Apps: Word Mover, Alphabet Organizer



RWT Apps: Word Mover, Venn, Timeline



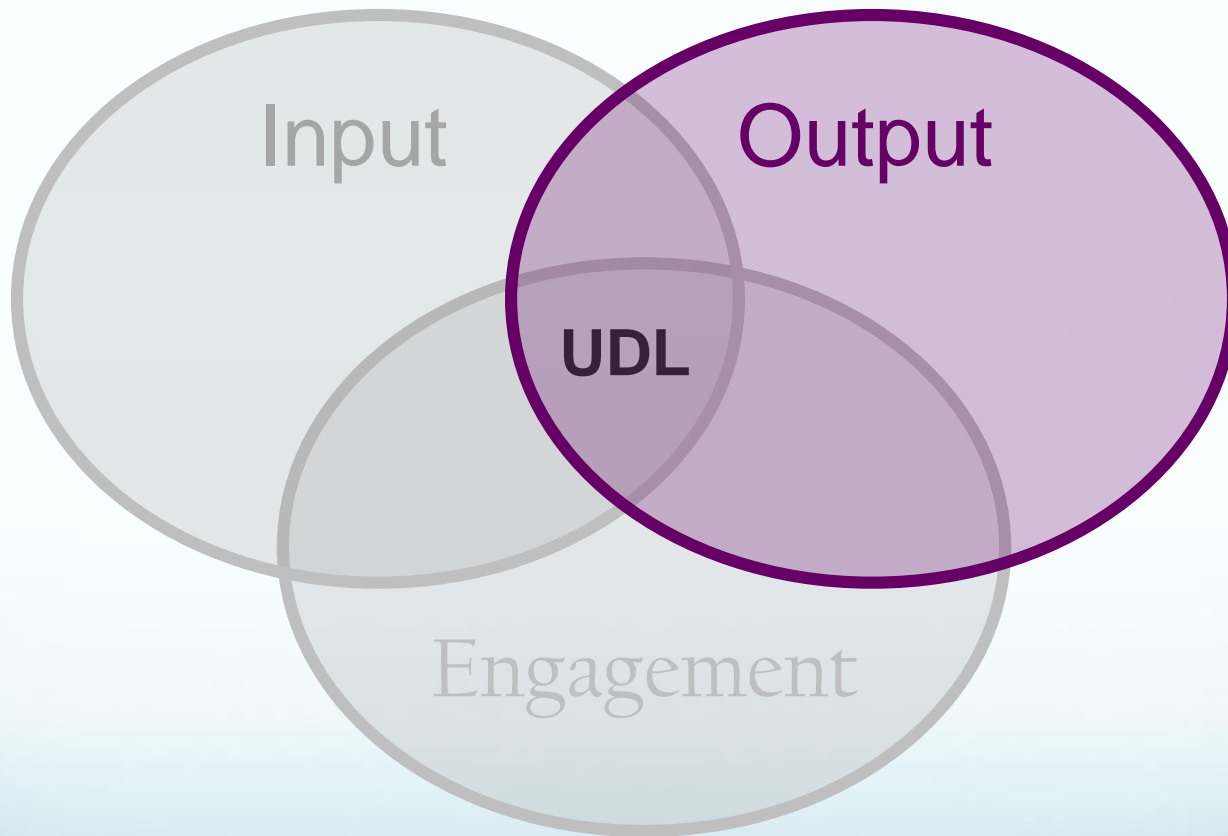
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For Videos and Demos:

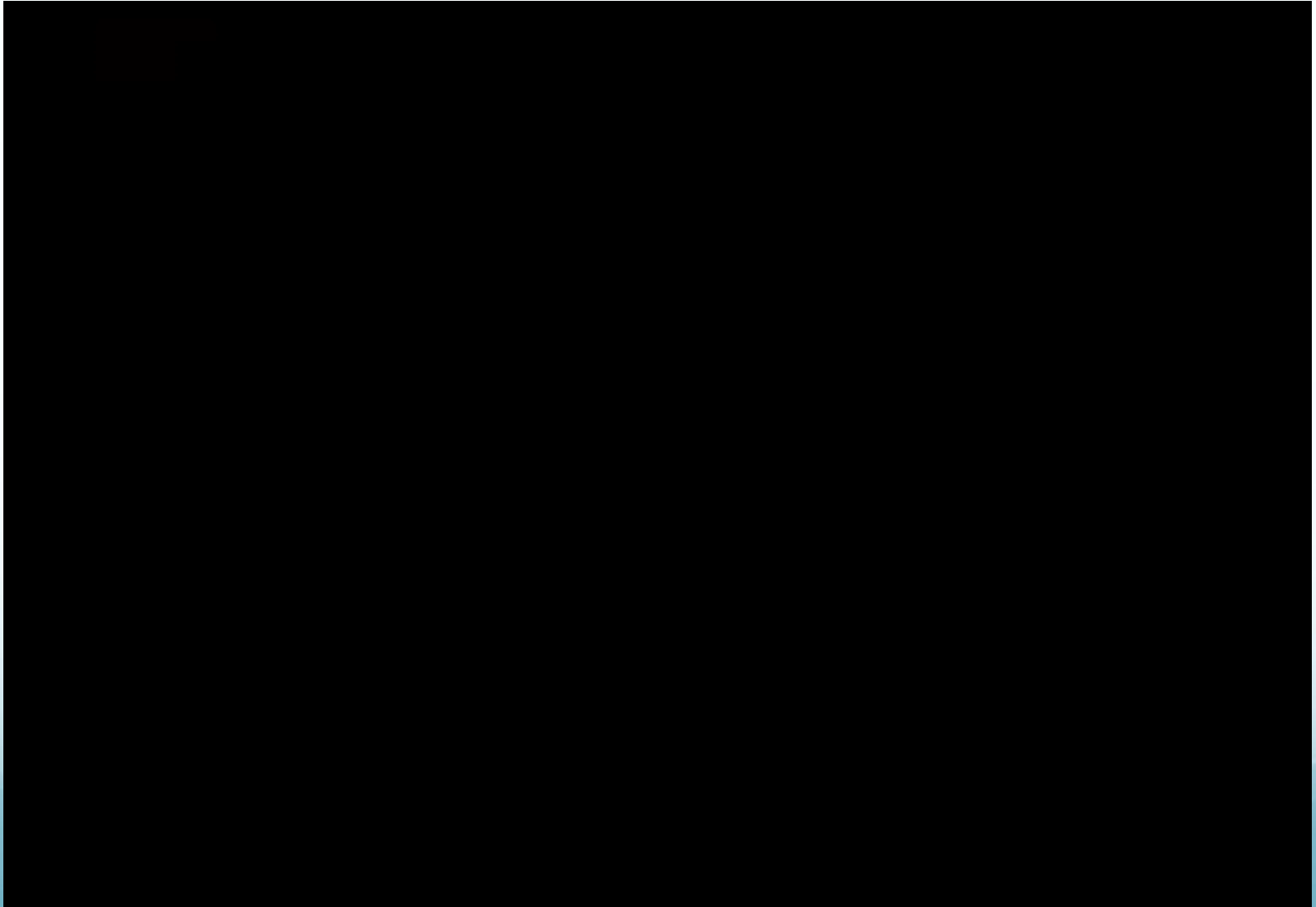
go to https://www.youtube.com/playlist?list=PLXU9mNdktYD9Yqu5I7bJ4cC0_U5LQJAHS

Output Learning Network





Proloquo to Go



Other Communication Apps



AutismMate 365: Community based, Connecting everyone on child's team. AutismMate365, an app for autism, seamlessly syncs the child's profile on up to 5 devices, connecting everyone around a consistent set of supports that extends learning to the home, therapy and the community. Sentence builder and Smart Scenes work at different language levels. Simple to complex--categorized



AvazPro: <http://www.avazapp.com/> Vocabulary grows with child. AAC and literacy/ learning device. The only AAC app that allows you to print out your child's vocabulary as a book, which you can carry with you. Stored on dropbox. Works at different levels of language-integrated picture keyboard-Picture assisted text prediction. Picture symbols, icons shrink or grow. Search feature for vocabulary. 7 voices.



Puddingstone: <http://autismate.com/PuddingStone-interactive-language-communication-game/> Interactive stories learning games for autism. Howard Shane developed. Animations and graphics.

Speech Apps: Augmentative and Therapeutic

See appsforautism wikisite and dropbox list

See Caron/Shane chapter in Book



Touch Chat with wordpower (\$159)



Iassist Communicator (\$19)



Tap Speak Choice (full \$149)



Picture AAC (\$29)
Non speaking



Auto Verbal (\$14.99)



Predictable: Context based prediction, dependent on whole constructed message, as opposed to just the previous word resulting in more accurate prediction. Choice of UK or US dictionary
- Multiple access methods to cater for people with limited physical ability;(\$159)

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Apps for Writing, Getting ideas out and Word Learning

Abilipad, iReadWrite, Clicker Docs, WordQ/SpeakQ, Ginger software, Readwrite

Writing

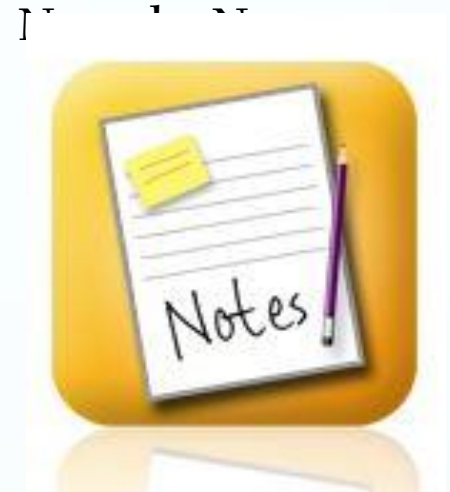
- ❧ Motor control
- ❧ Orthography (letters)
 - ❧ relationship to sounds
- ❧ Vocabulary
 - ❧ semantics (meaning)
- ❧ Syntax (word order)
- ❧ Discourse structure

Writing help: word prediction and speech to text



Cost \$14.99

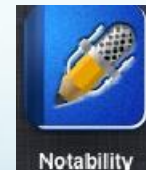
Dragon—speech to text
Nuance Notes



Typo reads back written words
And has word prediction

Clicker Docs and Typ-o

Will say typed words as they
are spoken and have prediction



Speech to text appears in keyboard
Also have option to record audio

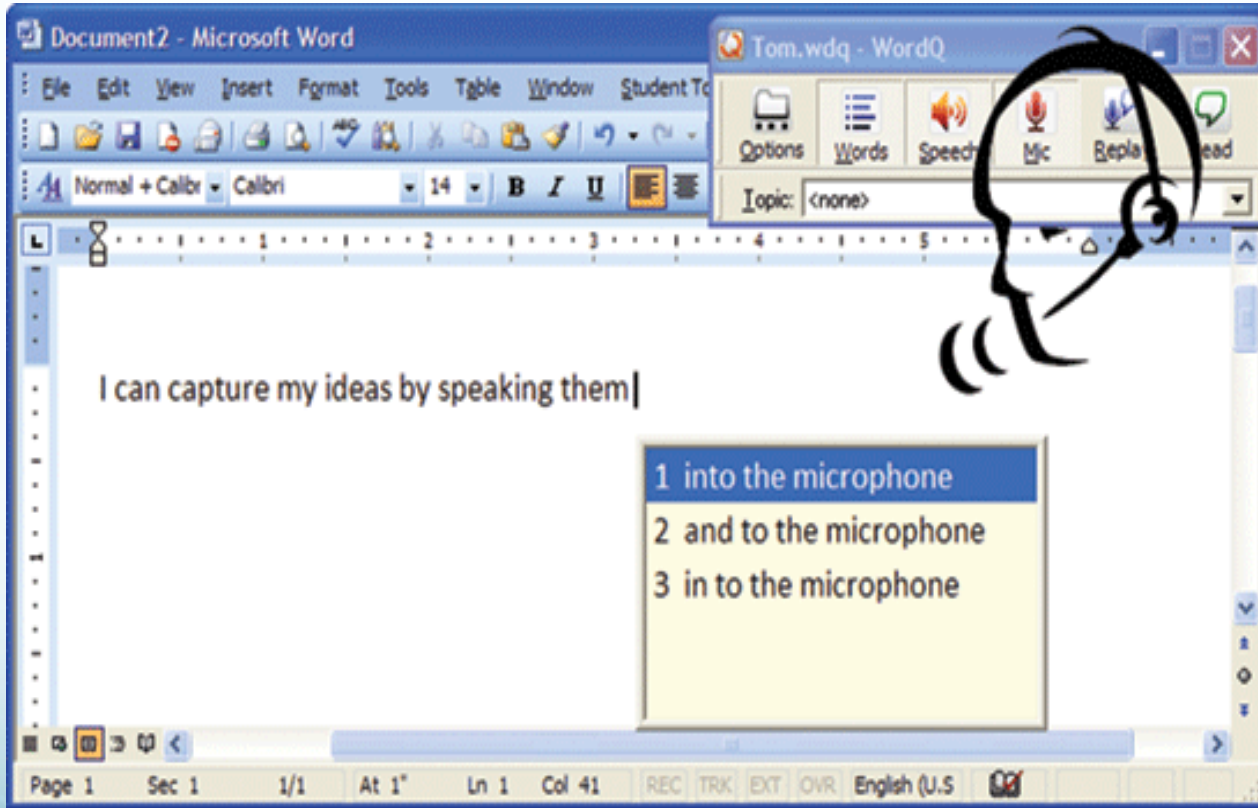
Notability allows recordings, or use
Siri for text to speech. Draw shapes.

Dragon dictate 4 review: <http://9to5mac.com/2014/03/29/review-dragon-dictate-4-0-for-mac-the-best-speech-recognition-app-gets-even-better/>



Writing

Remediation and Accommodation



Gingersoftware.com
Grammar and spelling
checker



Word Q and Speak Q by Goqsoftware—see Mayer Johnson



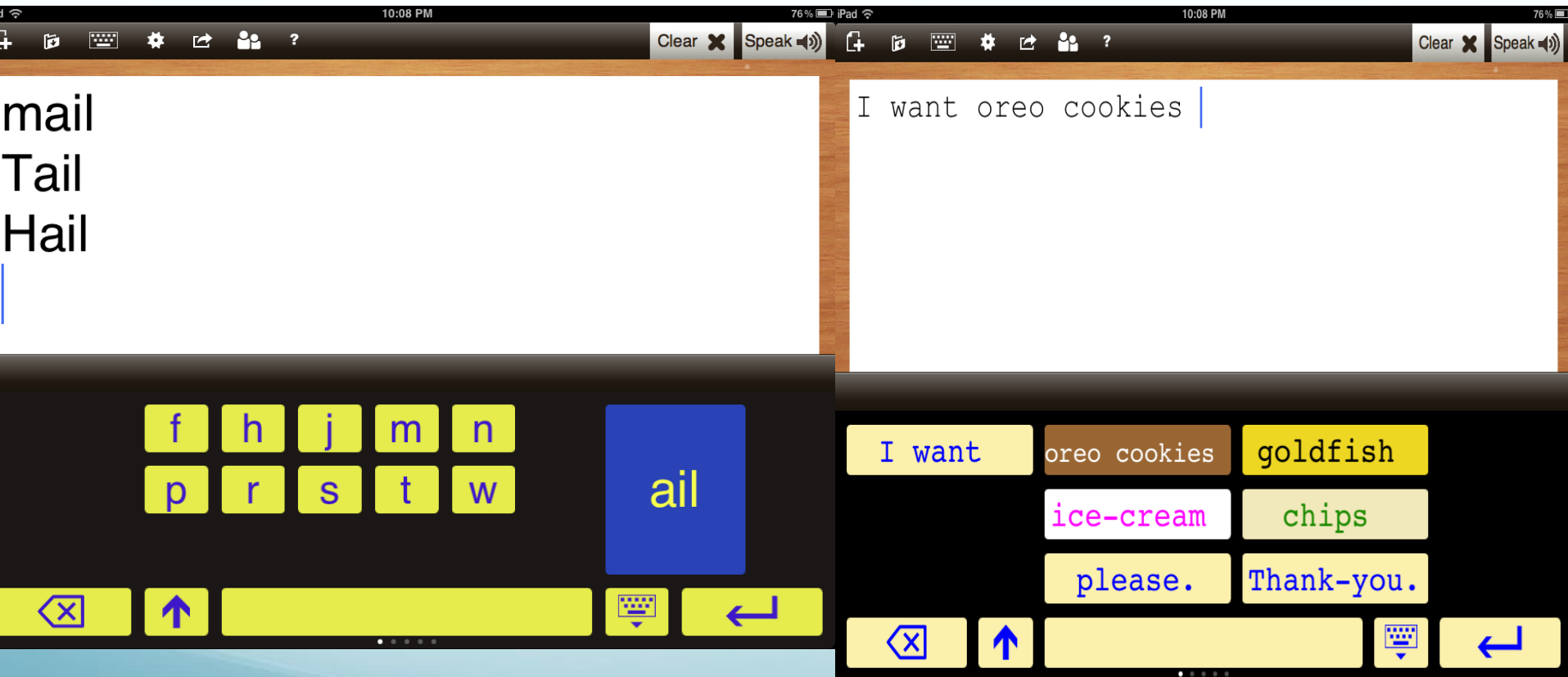
Cost: \$19.99

Abilipad

(create your own keyboard with text to speech)



This app can “grow” with the early writer and reader. Use as a communication device, early phonics learning, access to webbased shared keyboards and lessons.

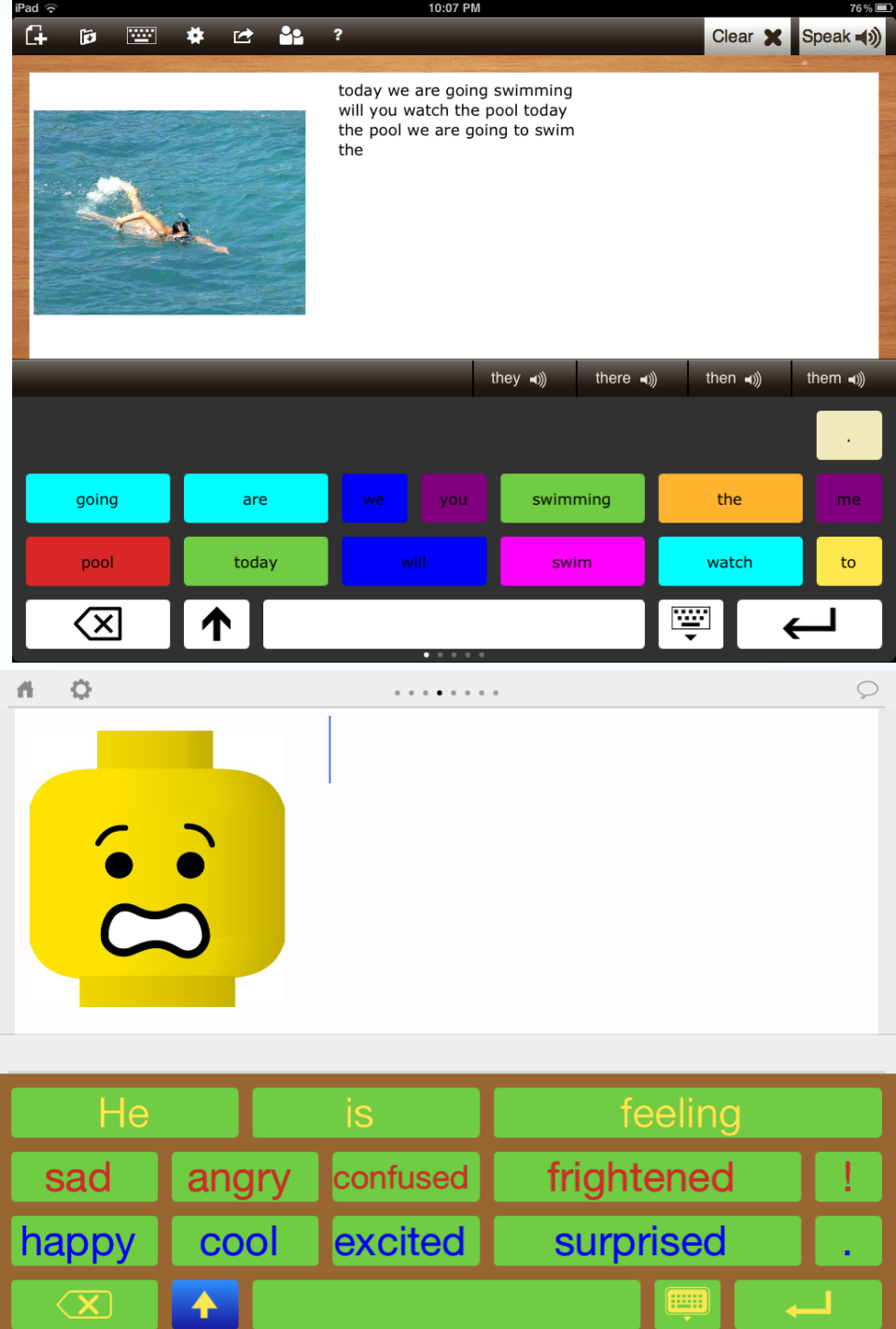
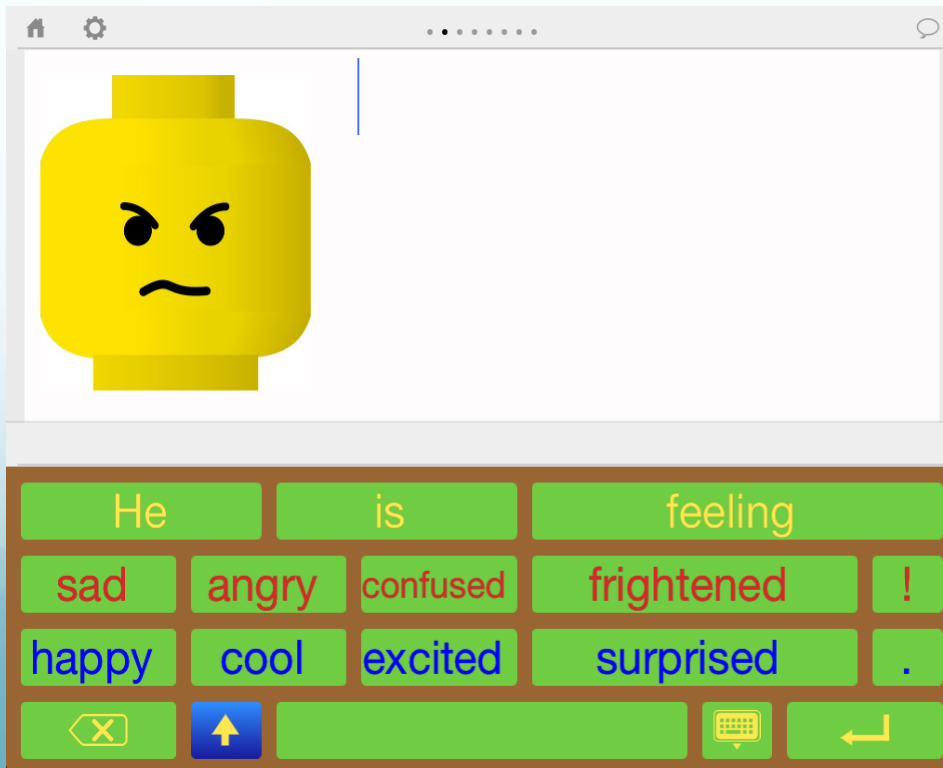




Abilipad

(create your own keyboard with text to speech)

Encourages a variety of different text learning skills. Has word prediction, Support for vocabulary and allows images and text to be shown on keyboard.





Abilipad

(create your own keyboard with text to speech)

Use for
comprehension
(input)
As well as writing
(output)

throwing away trash. recycling
paper. recycling glass. Earth
excited growing a plant.

growing a plant. throwing away trash. recycling glass. recycling paper. recycling plastic.

- Word Prediction
- Text-to-Speech
- Picture Support
- Multiple pages
- Font Selection
- Notepad color
- English, Spanish, French & German

Germany German



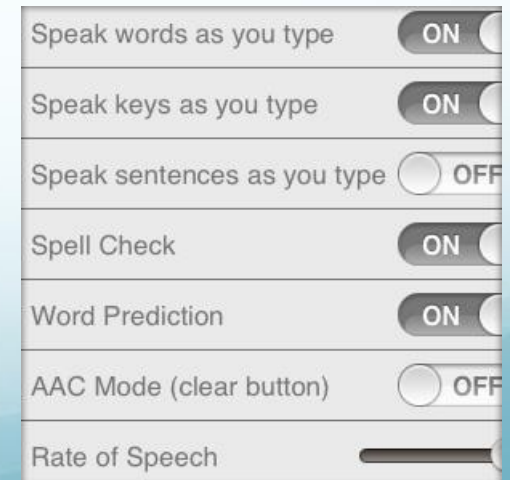
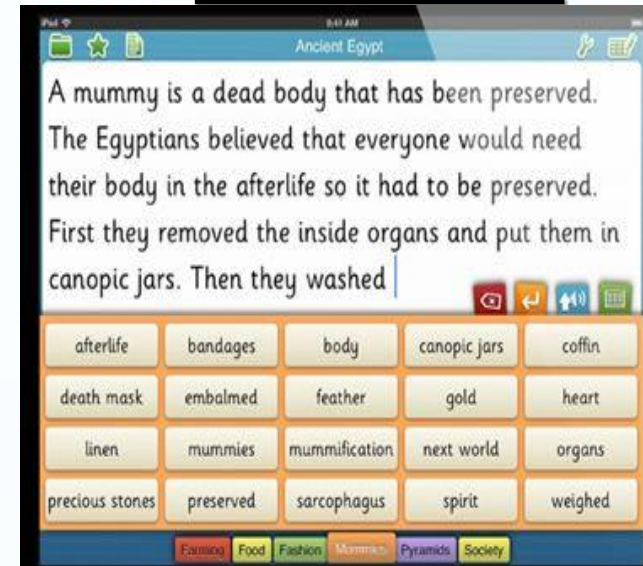
Abilipad

Apps for writing, TTS and comprehension

iReadWrite



ClickerDocs



These apps cost approx. \$20, as with abilipad

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Behavior tracker Pro (\$29)



ABC Data pro(\$27.99)

Apps for Data Management and Behavior Regulation

ecove observation, ABCdata pro, Behavior Tracker Pro, Symtrend



ABA Based Apps/Software: Collect data, have built in feedback, intense structure learning and rewards to increase positive behaviors from one situation to another

Core VAST



iPrompts (\$99)



Autism Behavior tracker (\$4.99)

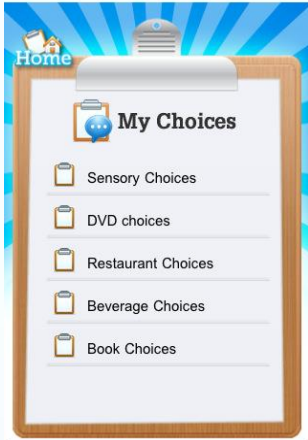
Iprompts Pro

- <http://www.handholdadaptive.com/iPrompts.html>

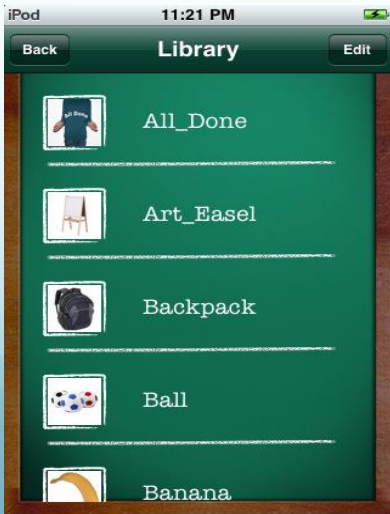


Behavior Management Tools

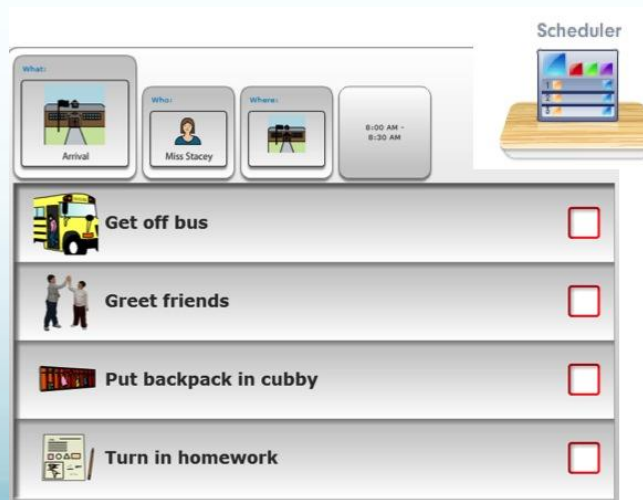
My Choice Board



First, Then



- Short attention span
 - Break down tasks into smaller pieces
 - Reward performance
- Instructions are clear, consistent, simple, and concrete
- Information is represented visually



Time Timer





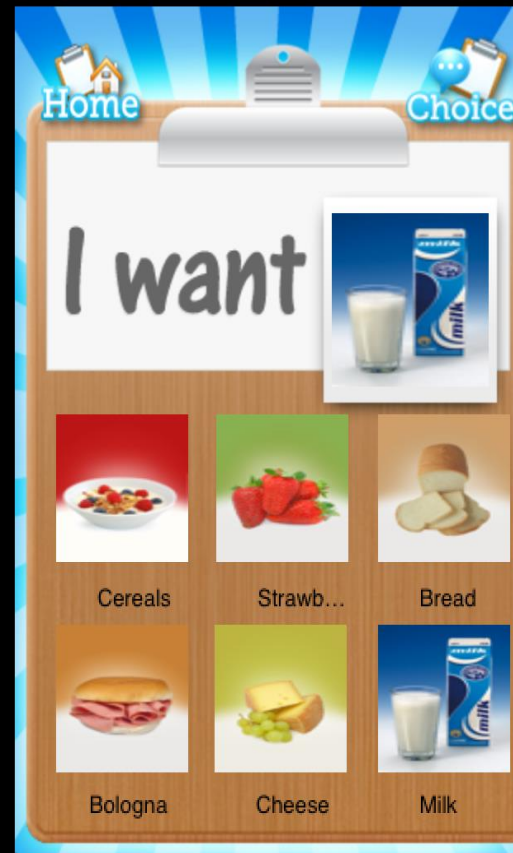
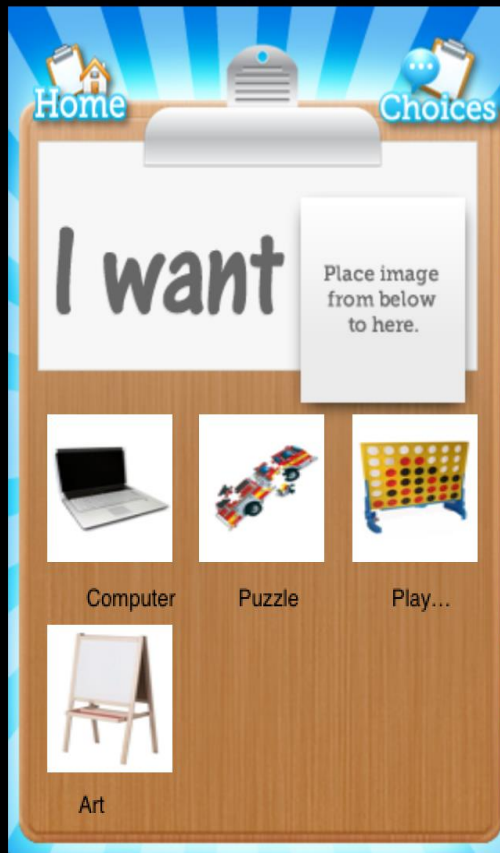
Choice Boards, Schedulers

First, Then

Both apps allow you to record speech, Insert images, Or use databank of images/sounds



My choice board



Symtrend: ABC and FBA



Prev

Mid-morning

Next

In which time block did tantrums occur?

Morning

Mid-morning

Afternoon

Help

Prev

Mid-morning

Next

In which morning time block(s) did tantrums occur?

8:00 - 8:15

8:15 - 8:30

8:30 - 8:45

8:45 - 9:00

9:00 - 9:15

9:15 - 9:30

9:30 - 9:45

9:45 - 10:00

Help

Prev

8:30-8:45

Next

Did a tantrum occur during 8:30-8:45?

Yes

No

Help

OR

Prev

8:30-8:45

Next

How many tantrums in this 8:30 - 8:45 interval?

0 ≤ (Times) ≤ 100

Prev

8:30-8:45

Next

What was the immediate antecedent of tantrum(s) in interval?

Demand

Denial of activity or item

Termination of activity

Termination of attention

Presentation of interaction

Reinforcement

Change in Schedule/Activity Transition

Waiting

Noisy/Loud Environment

Help

Prev

8:00-8:15

Next

What was/were the consequence(s) for tantrums?

Attention

Ignored

Demand removed

Demand maintained

Item/Activity given

Item/Activity removed

Redirected

Behavior plan implemented

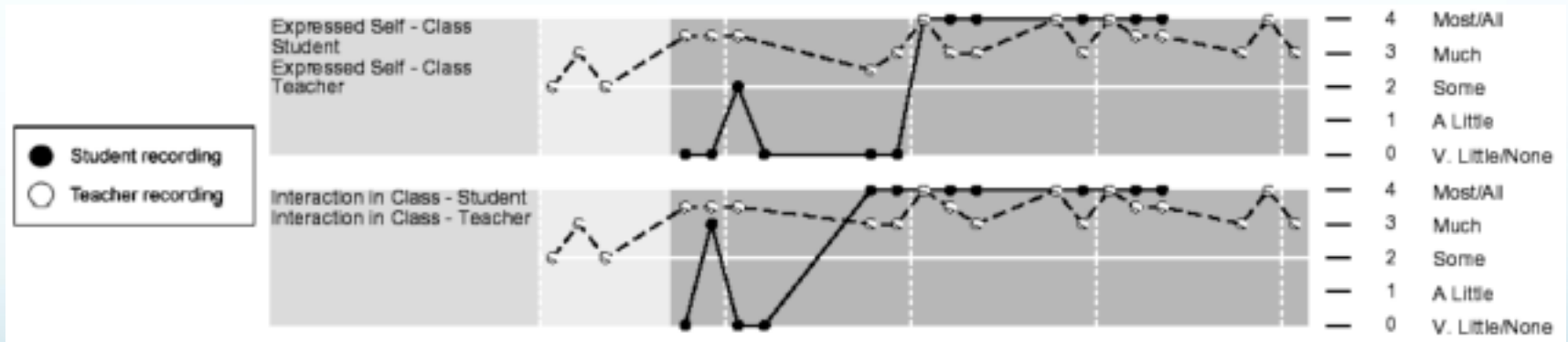
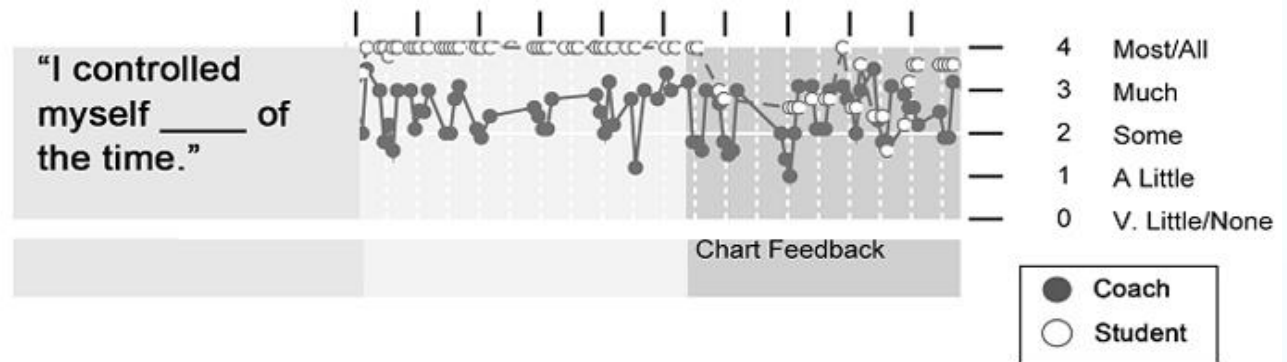
Help

| Date | Negative Behaviors During 12:00 - 12:30 | Negative Behaviors During 12:30-1:00 | Negative Behaviors During 1:00-1:30 | Negative Behaviors During 1:30-2:00 | Negative Behaviors During 2:00-2:30 |
|-------------------------|--|--------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 2011-02-03 13:30 Thu | Banging/throwing objects Crying/screaming | | | | |
| 2011-02-03 14:30 Thu | | | | | Bolting/eloping Crying/screaming |
| 2011-02-04 11:45 Fri | | Making noises | | | |
| 2011-02-04 14:30 Fri | | | | Making noises | |
| 2011-02-04 | | | | | |

No more Meltdowns
<http://symtrend.com>



Graphing Emotion Regulation



After training, students and teacher converge more on ability to record expression and interaction; More in synch with coaching and viewing graphs together

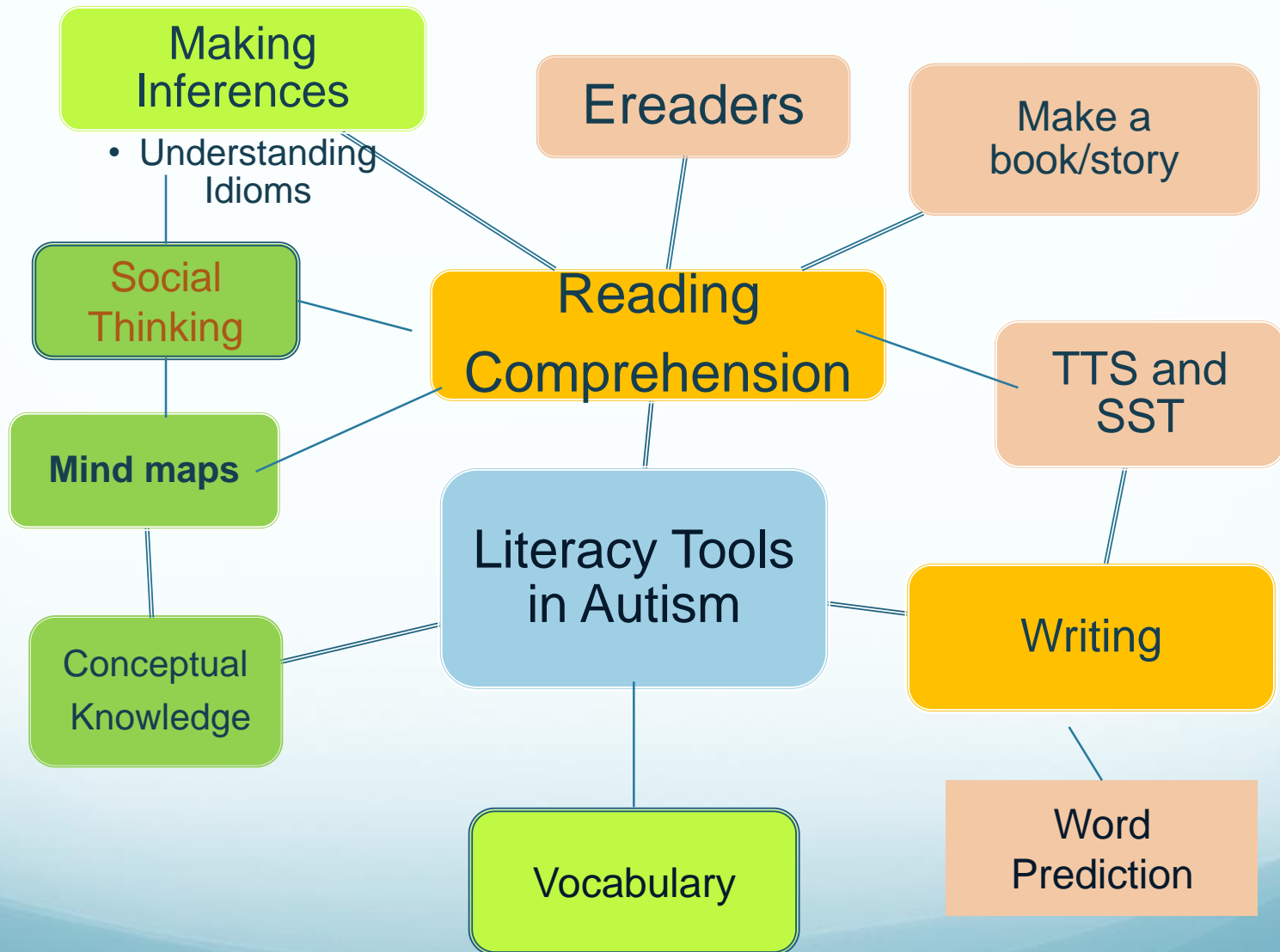
Overview

- Word Games and Assessment tools to Engage
- Graphic Organizers and Mind Maps
- Reading Comprehension
- Data /Schedulers Management (covered more on Wikisite)
- Reading and Writing apps that speak and predict words (STT& TTS)
- Ebook creators and Story Telling apps: Social Stories
- Facilitating Social Communication

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Overview of Literacy Areas



Reading Comprehension

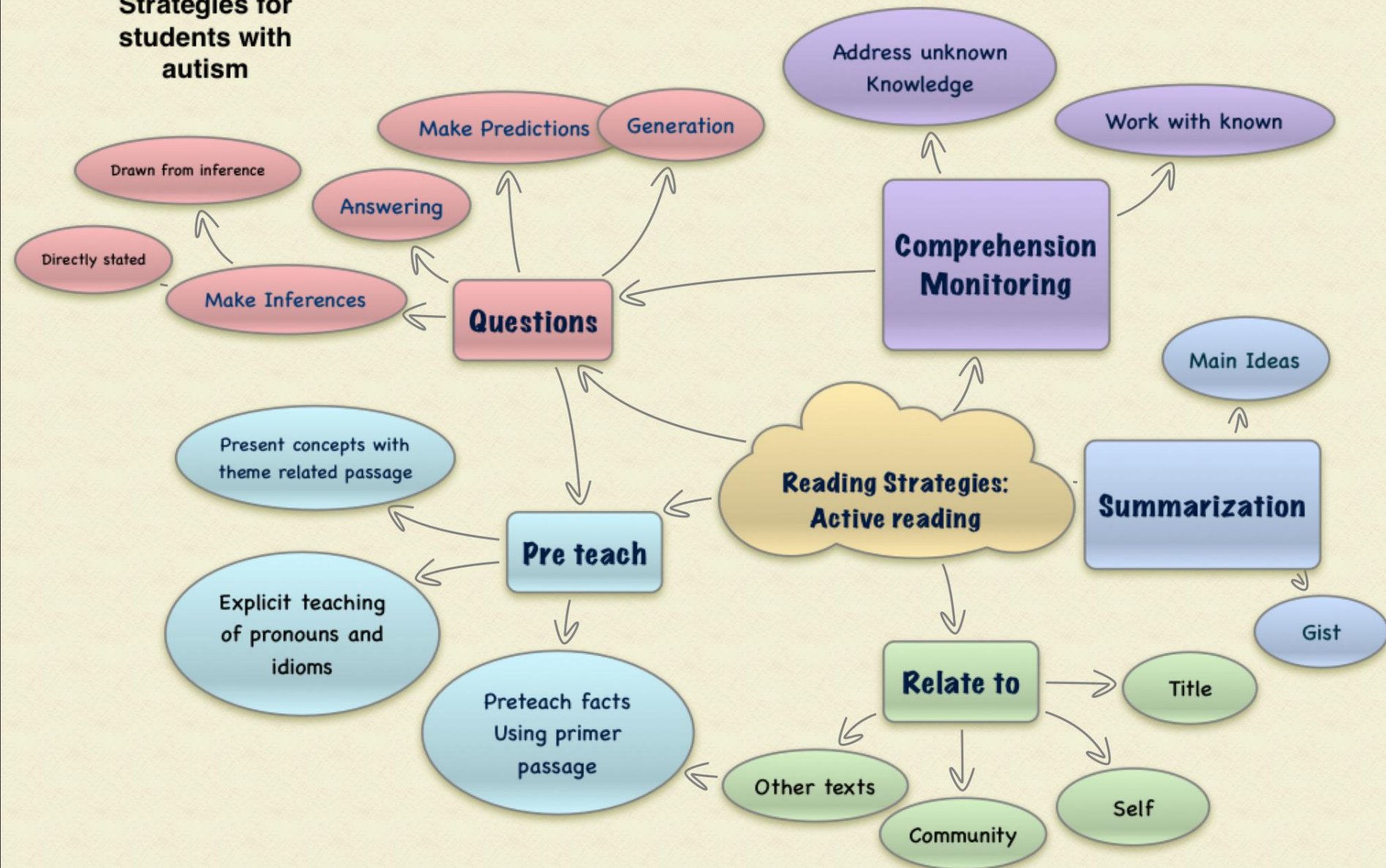
And Inferencing

Comprehension in Autism

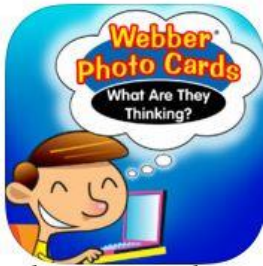
From Iland (2011)



Reading Strategies for students with autism



Reading Comprehension Apps



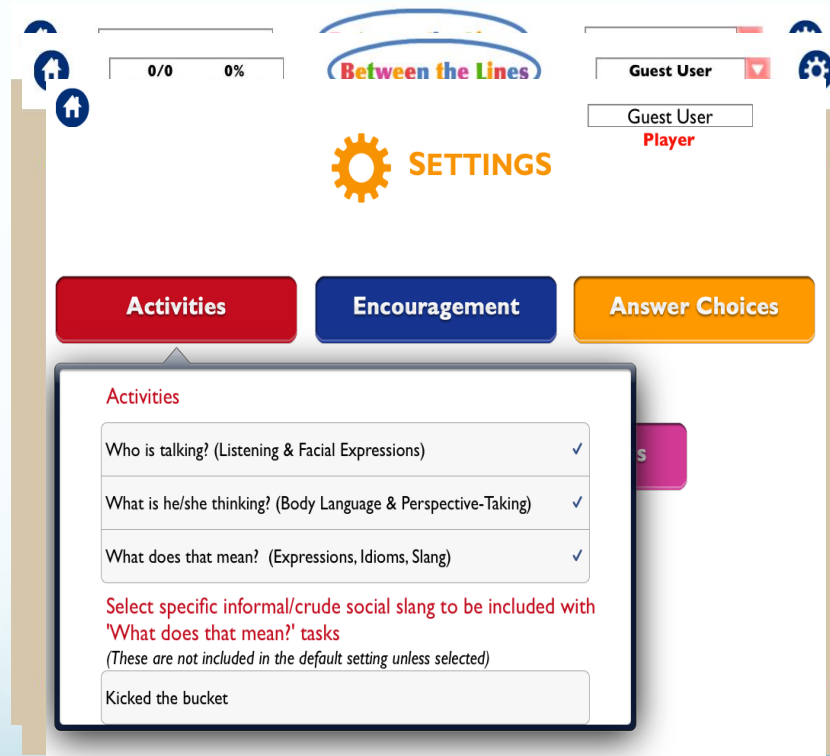
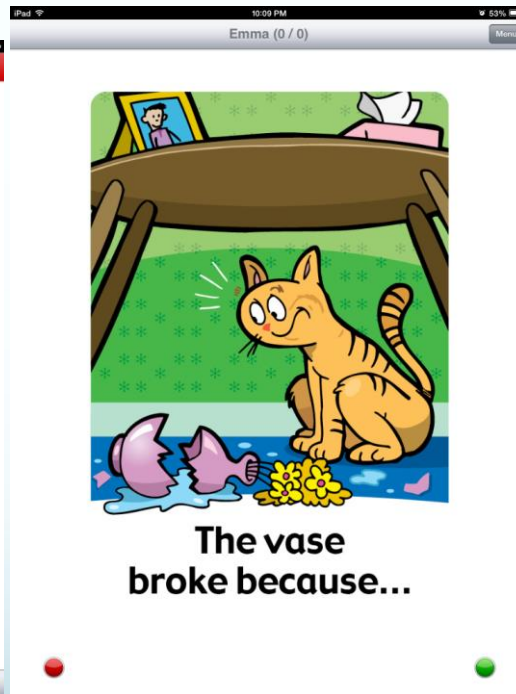
What are they thinking?



Inferences



Between the Lines



SuperDuper Apps-most cost .99

Hamaguchi apps

Reading Comprehension Apps 2

Idioms/kidioms

AbiTalk Apps

Guest's Reading Comprehension Report

Menu

Guest

Mercury is the smallest planet. It is a little larger than the Earth's moon. Mercury has no moon of its own.

Photo of Mercury taken by MESSENGER

The MESSENGER spacecraft being prepared to launch

Because Mercury is close to the Sun, it is very hot. But Mercury rotates slowly and the side not facing the sun can get **extremely** cold.

The **atmosphere** on Mercury is very thin, and contains no water or oxygen. People could not live on Mercury.

Mercury is difficult to see from Earth because it is so close to the **glare** of the Sun. It is sometimes visible in the morning just before sunrise, other times it may be visible in the evening just after sunset. The Romans named Mercury after their messenger god, because Mercury moves so quickly across the sky.

Submit

Mercury is the smallest planet

2/6

☐ Yes

☐ No



Tactus
Language



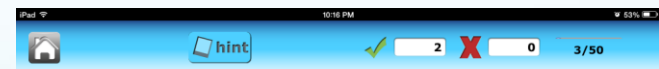
The best thing since sliced _____.

break

bread

meat

easy



digging

singing

stacking



Interactive Multimedia Science Reading App

- <http://mobile-educationstore.com>



Pines to Vines

First and foremost, it is capable of adjusting the reading level from a beginning reader, all the way up to a middle school level.”



SeaShores to
SeaFloors

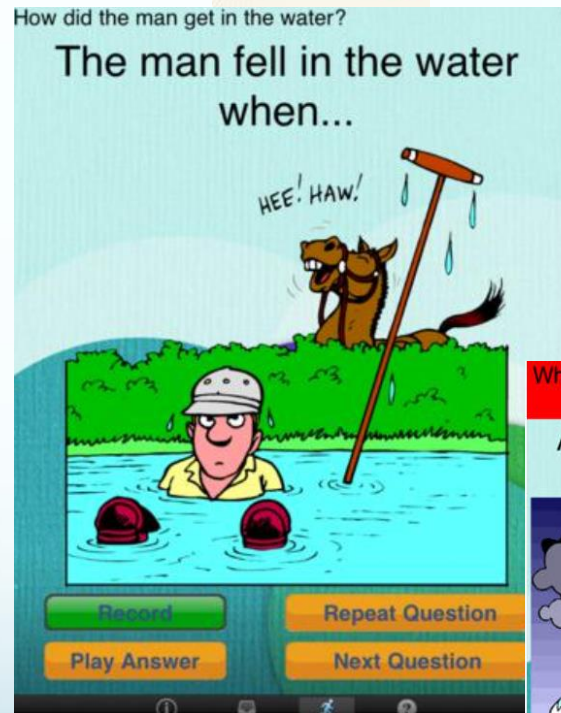
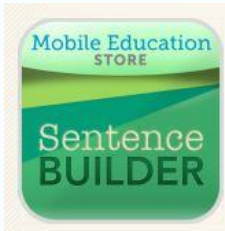


Blades

Each book costs
about \$9.99

http://teacherswithapps.com/app_reviews-crack-the-books/

Mobile Education Apps



Where will the boat go when the storm ends?

After the storm ends, the boat ...



Select

Repeat Question



Info

Settings

Stats

Play

These apps range from \$5-8.

Mobile Education: Preposition Builder

iPad 9:45 PM 79% iPad 9:45 PM 79%

Down-Up-Off

0 / 21

The lizard is going up the ladder.



Next Sentence

Hello Emma

Here is your performance report.

You can email this to your parent or teacher

| Module | Attempts | | |
|--------------------------|----------|--------|-------|
| | First | Second | Third |
| In-On-Under | 0 | 0 | 0 |
| Down-Up-Off | 0 | 0 | 1 |
| Above-Below-At-By | 1 | 0 | 0 |
| Behind-Between-Beside | 1 | 0 | 1 |
| Out of-Next to-Away from | 0 | 0 | 0 |
| Toward-Around-Through | 0 | 0 | 0 |

Email Stats

Show my animations



Mobile Education Rainbow Sentences and Speech Builder

The car is going

are flying.



Get 3 more correct to unlock the next puzzle piece!!

through the carwash.



Get 1 more correct to unlock the next puzzle piece!!

The children

Show

Show

Foreword by Michelle Garcia Winner

I Get It!

Building Social Thinking® and Reading
Comprehension Through Book Chats



- Use the book to consider how to structure “social” book chats.
- Relate character emotions to the story narrative and have students relate to personal experiences that are meaningful to them.
- Makes emotions more ‘concrete’.
- Use Social Stories-
- See Joke sites ..

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Making Ebooks and Digital Stories



http://www.youtube.com/watch?v=zRb3GguSRvY&feature=youtube_gdata_player

Create Social Sequence Stories

e.g., prepare for or describe a trip

Book Creation Apps Construct your own iBook with familiar voice, video & images



cost: 2.99



Cost: 2.99



Cost: 14.99

Pictello



Pictello, Speech Journal, iBook creator, Stories2learn, dipStories, Bookabi, CBB, My Story Time, eStory, StoryPatch, Storyjumper, Puppet Pals, & many more

eBook Creators

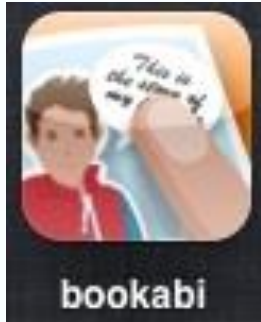
For iPad



Book Creator



Pictello



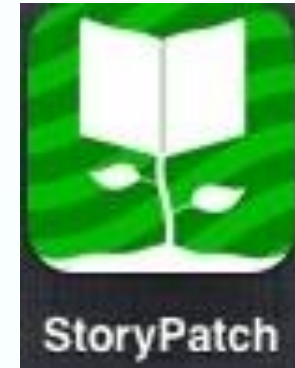
bookabi



Little Book Creator



Speech Journal



For iOS/android:



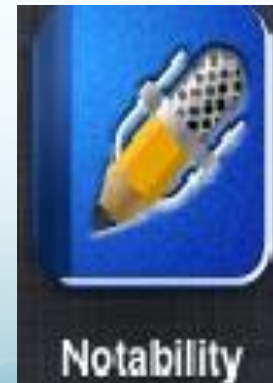
BookMagic



Picturebook



eBook Magic



Notability



Fairy Tale

Book Creators for Android



Photo Story



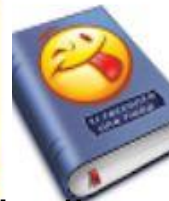
eStory



Books
& music



My
Storytime



I tell you
a story

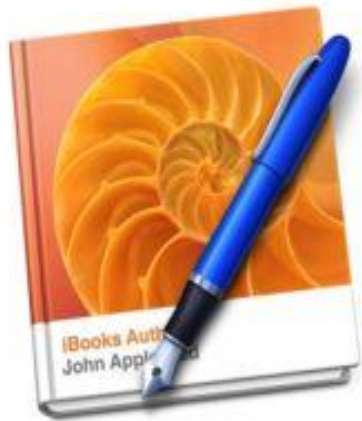


Digital Books For PC or Mac



For Webpage conversion:

<http://dotepub.com>



Make a book on a PC: CAST

- Book Builder



Read Books



Model Books

Read, comment, and rate other users books.

Public Library Books

Read, comment, and rate other users books.

Create & Share



Create and Edit My Books

Login to author your own books.

Shared Books

View books shared with you.

Learn More



Learn about UDL

View videos about Universal Design for Learning.

Tips and Resources

Find authoring ideas on media, features, and more.

eReaders...with voice!

- Check format that each allows e.g., PDF, mobi, epub...

Notes with recordings

For Text to speech of docs, .pdf or books:



VoiceDream



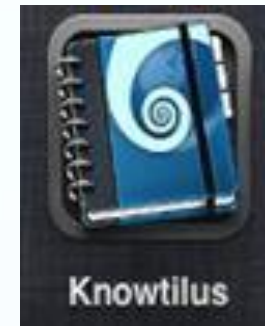
Read2Go



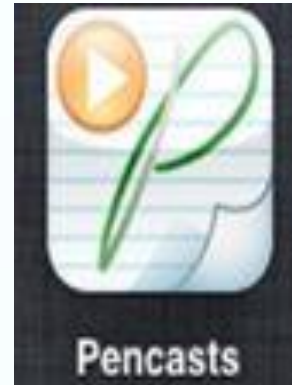
Vbookz



ClaroSpeak UK



Knowtilus

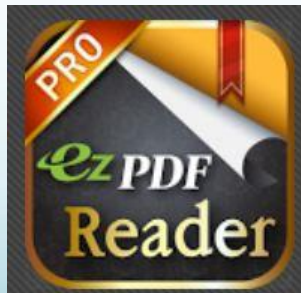


Pencasts

Cross-platform:



docstorm



Perfect reader



Speak it!

Ereader platforms with TTS

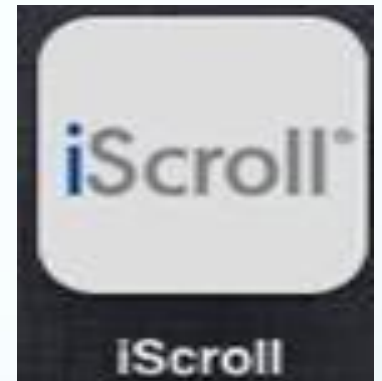
- Allow you to listen to voices. Varying degrees of ‘human-like quality. See chart (slide 58)



Blio



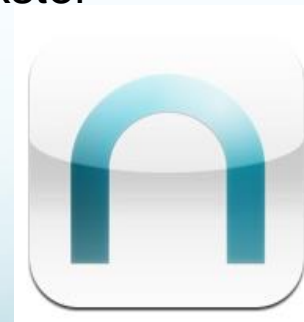
bookster



Google Books
(on android)



iBooks (set Accessibility to “speak selected”)



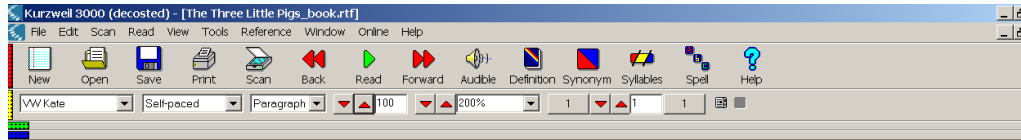
Nook for kids

Text to Speech and recording

- Voices can be purchased separately on android devices and run from the system. On iOs, you purchase voices within an app but it only runs with that app



Reading Software



"Not by the hair of my chinny chin chin" said the pigs.

Well, the wolf huffed and puffed but he could not blow down that brick house.

But the wolf was a sly old wolf and he climbed up on the roof to look for a way into the brick house.



The little pig saw the wolf climb up on the roof and lit a roaring fire in the fireplace and placed on it a large kettle of water.

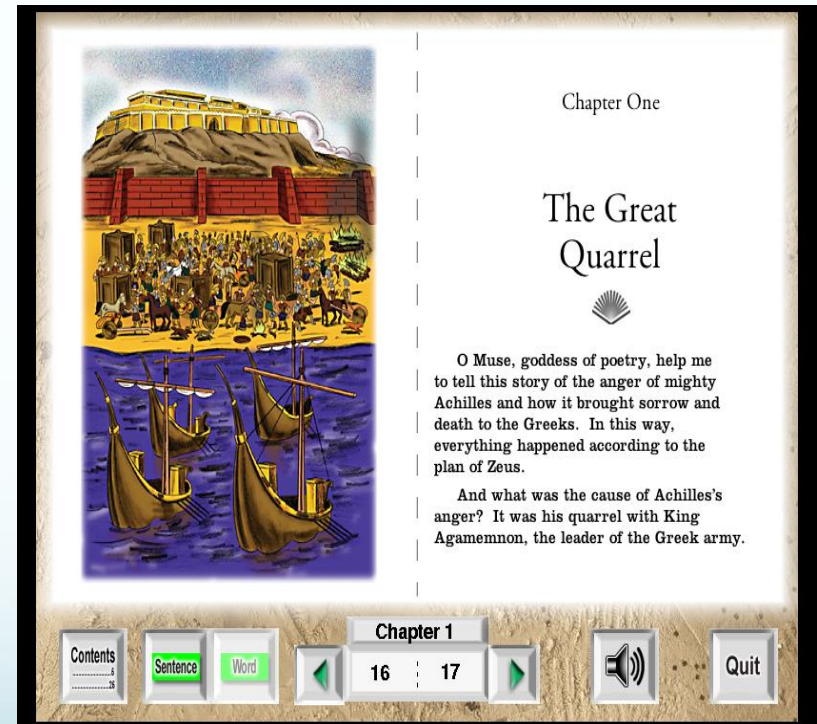
<http://www.kurzweilededu.com/>



See Mobile Media:
Pines to Vines and Oceans
For Ipad

http://www.donjohnston.com/products/start_to_finish/

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Other Communication, Narrative, Social tools

Narrative storytelling and Social Language apps

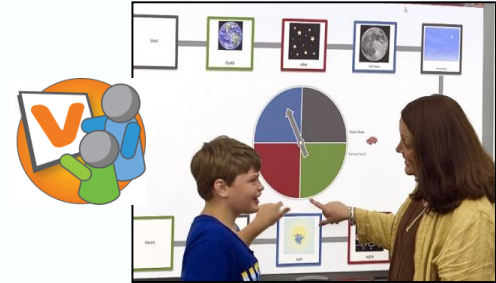
Emerging Technologies: “Forced Collaboration”



Battochi, A. et al. 2010 “Collaborative Puzzle ”

Using Tech to facilitate Socialization/ Interaction with Peers

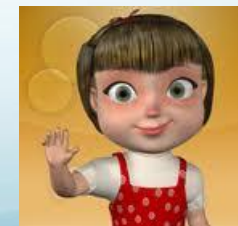
- **VizZle game board**
 - Plays on Interactive Whiteboard, computer or Android or iPad tablet



- **Math and Word Bingo**
 - Rewards built in
 - Leveled activities



- **Eye Gaze and Social cue apps**
- **Talking Tom Cat and characters**
 - Imitation and play



My play home/theater: Simulations

My
PlayHome



MAKE BREAKFAST
IN THE KITCHEN!



Make Your Own Videos

- Children with autism do not learn steps to do a task unless each step is each explicitly paired with an audio/video/picture label (Linda Haymes, MIND Institute, UCSD).
- Great video describing the research and how to make your own
at: <https://sites.google.com/site/autismtechnology/motor-sensory-and-behavioral/adls-schedule-tools/video-modeling>

Video Picture Story and Animation



Educreations

Record a presentation with imported pictures, Allows annotation and makes video of your instructions



Splice



Adobe Voice



Touch Cast



Songify



30 Hands



Audioboo

Record short audio bits with a single photo
Saves to a website, embed code can be imported

Cartooning/Animation



Lego stop-motion



Animation Studio



I motion

Animation is created from several images shown in short intervals,

Gives illusion of motion through the 'flipbook' style (15-20 frames per minute)

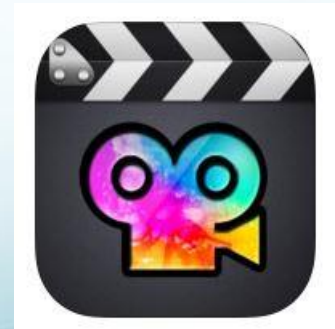
Each new frame pushes the motion forward. Students can create short animations

Or teacher can provide a template for storytelling



Create a cartoon layout with images.

Insert text bubbles and clip art



i-stopmotion

Communication through Storytelling: Learning Story Structure skills

- Listen and watch others 'tell' their story.
- Encourage students to use speech to tell their own “stories.
- Use Talking Anya/Tom or Sock puppets
- Pow!, Toontastic, StoryKit, StoryRobe, SonicPics, Animoto, Tellagami
- Find these under “books/literacy” category on the wikisite



Talking Anya



Tellagami



Toontastic



Sock Puppets

Thanks! Enjoy “playing” with
your new tools

Start making Stories and Videos
of your own experiences for friends
and family to learn

Check out the websites and resources in the DROPBOX folder

And on <http://bit.ly/appsforautism>

<http://bit.ly/appsforlearning>

And in the Book! Email me at info@gifteddifferentlearner.org